

# Monthly Current Affairs

## OCTOBER - 2019

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## 1. Affirmative Action (AA) at the crossroads

### Meaning

- Affirmative action laws are policies instituted by the government to help level the playing field for those historically disadvantaged due to factors such as race, color, religion, sex, or national origin.
- These laws typically pertain to equal opportunities in employment, education, and business.
- It can also be looked at as eliminating or bringing down decimations against a particular set or group of people.

### Background

- In 2014, a group called “Students for Fair Admissions” (SFFA), founded by Edward Blum, alleged that Harvard University discriminates against Asian-American applicants in the undergraduate admissions process.
- The lawsuit claimed that Asian-Americans were held to higher standards compared to students from other races, and that Harvard was using an “illegal” quota system, which informally capped the number of Asian-Americans, but gave preferential access to African-American or Latino students.

### A look at stats

- The Asian-Americans are roughly 6% of the U.S. population, but 23% of them entered the batch in 2018, compared to 15% African-Americans and 12% Latino students.
- Indeed, the share of Asian-Americans in the top U.S. universities is far greater than their share in the population, and this makes it prima facie difficult to understand their grievance.

### How Harvard decides on the quota?

- Harvard acknowledged that they did, indeed, use race as one factor among many, mainly to ensure a diverse student body. They claimed that their use of race was consistent with law.
- Harvard’s applicant pool consists of students with outstanding academic credentials, and the process is very competitive.
  - \* In 2019, it received 37,000 applications for 2,000 seats; more than 8,000 of these had perfect grades, and more than 5,000 had perfect mathematics or verbal SAT scores.
  - \* Thus, to choose from this pool, a strong candidate cannot be defined only on the basis of test scores; non-academic aspects have to be considered.

- Harvard claims that they judge ‘excellence in a variety of forms, and include students with diverse experiences, backgrounds, skills and interests’.

### Indian parallel

- In India, the fact that entry-level cut-offs are lower for reserved category students is seen as proof that the reservation policy is “anti-merit”, and leads to its corollary, viz., abolition of reservations is needed in order to improve merit.
- AA, or reservations in India, is essentially a policy of compensatory discrimination, which discriminates in favour of groups that are traditionally discriminated against, stigmatised and marginalised, such as African-Americans, Latinos in the U.S.; Dalits and Adivasis in India.
- Because of historical and contemporary discrimination, these groups would typically be under-represented in formal institutions, and in order to compensate for that, preferential policies such as quotas are needed.

### Other methods of college admissions unchallenged

- “Legacy” Admissions, I.E. Preferential Admissions for students whose parents graduated from Harvard or Radcliffe (its former sister school)
  - \* According to 2018 data, 42% of private institutions and 6% of public institutions in the U.S. consider legacy status as a factor in admissions.
- What did the lawsuit say about legacy admissions? Nothing. Those against AA turn this logic on its head and argue that the preferential policies are unfair and foster inequality, because they use criteria other than “merit” for admissions (race in the U.S., caste and tribal status in India).
- However, these critics are blind to the elephant in the room: legacy admissions in the U.S., or their Indian counterpart: discretionary management quotas or donations-based admissions.
- These methods of entry are opaque, completely divorced from “merit” (even in the narrowest sense of examination scores), and blatantly favour those with means and privilege.

### Conclusion

- Earlier the Federal District court ruled in favour of Harvard.
- However, if the case goes to the Supreme Court and if it strikes down the use of race as a criterion for admissions, it would mean an end to affirmative action (AA).

- This is a complicated and important case not just for the future of AA in the U.S., but because it has the potential to impact anti-AA sentiment everywhere.

## **2. CJI names Justice Bobde as successor – Appointment of CJI**

### **Context:**

Chief Justice of India Ranjan Gogoi has recommended Justice Sharad Arvind Bobde as his successor and the 47th Chief Justice of India in keeping with convention and the seniority norm

### **Appointment of the Chief Justice of India:**

- The Constitution of India does not have any provision for criteria and procedure for appointing the CJI.
- Article 124(1) of the Indian Constitution says there “shall be a Supreme Court of India consisting of a Chief Justice of India”.
- The closest mention is in Article 126, which deals with the appointment of an acting CJI.
- In the absence of a constitutional provision, the procedure relies on custom and convention.

### **What is the convention?**

- When the incumbent CJI retires (all Supreme Court judges retire at the age of 65), the senior-most judge in the SC becomes the CJI.
- Seniority, here, is not defined by age, but by the number of years an individual has been serving as a judge of the apex court.
- In an instance where two judges have served for the exact same time, because they were appointed as SC judges on the same day, other factors are considered to determine the seniority of the judges, like which judge has more years of experience in the high court and if either of them were nominated from the bar directly.

### **What is the procedure?**

The procedure to appoint the next CJI is laid out in the Memorandum of Procedure (MoP) between the government and the judiciary:

- The procedure is initiated by the Law Minister seeking the recommendation of the outgoing CJI at the ‘appropriate time’, which is near to the date of retirement of the incumbent CJI.
- The CJI sends his recommendation to the Law Ministry; and in the case of any qualms, the CJI can consult the collegium regarding the fitness of an SC judge to be elevated to the post.
- After receiving recommendation from the CJI, the law minister forwards it to the Prime Minister who then advises the President on the same.
- The President administers the oath of office to the new CJI.

### **Does the government get a say?**

- Except for the law minister seeking the recommendation from the incumbent CJI, and forwarding it to the Prime Minister, the government has no say in the appointment of the CJI.
- Vis-à-vis the appointment of the CJI and the appointment of SC judges, the key difference is that in the former, the government cannot send the recommendation of the CJI (or the collegium) back to them for reconsideration; while in the latter, the government can do so.
- However, if the collegium reiterates those names, then the government cannot object any further.
- The Memorandum of Procedure does not have any provision for the eventuality of the government disagreeing with the incumbent CJI’s recommendation on the new one.

### **Have there been exceptions to the aforementioned procedure?**

- Since the establishment of the Supreme Court in 1950, there have been 46 CJIs.
- In all cases, the convention and the procedure were duly followed, except for two – Justice AN Ray and Justice MH Beg. Both exceptions took place when Indira Gandhi was the Prime Minister.
- Justice AN Ray was appointed as CJI in 1973 despite being fourth in terms of seniority after Justices JM Shelat, KL Hegde and AN Grover.
- The reason was the involvement of these three judges in the landmark Kesavananda Bharati case, which had held that Parliament cannot make amendments to the Constitution that would alter its “basic structure”.
- Similarly, Justice MH Beg was appointed as the CJI in 1977 despite Justice HR Khanna being senior. This was because of Justice Khanna’s minority judgment in the ADM Jabalpur case.
- Justice Khanna had pronounced that he did not agree with the government’s argument that detention of persons during the Emergency cannot be questioned, even if mala fide and without the authority of law.

## **3. ‘Hybrid Model’ to elect civic body heads in Rajasthan**

### **Context**

- The Rajasthan government has announced implementing a hybrid model under which a candidate can become Mayor, President and Chairperson even without contesting an election or even after getting defeated in the election.
- A notification has been issued in this regard.

### **Details**

- The Rajasthan Municipal (Election) Rules, 1994 have been amended to indirectly elect president, chairman and mayor to the municipal institutions.

- \* Under the new rule, a mayoral aspirant will neither have to be a councilor nor will have to mandatorily contest an election.
- \* His name can be proposed by a party and be supported by the councillors.
- However, members of Parliament or the state legislative assembly cannot contest for these posts
- Rajasthan will be the first state in the country to implement this model of parachuting civic body heads.

#### Concerns

- The decision would weaken democracy and encourage back door entry of candidates in the urban bodies.
- It would reduce the significance of councilors and weaken democracy at the grassroots.

#### **4. Disabled people can now vote via postal ballots**

##### Context

- The government has released a notification which says that Differently abled people and those over 80 years of age can now cast their vote through postal ballots

##### Current status

In India voting is carried using the Electronic Voting Machine (EVM). However, in certain cases the voters aren't able to come to the polling booth to cast their vote. At such times, postal ballots are used to cast votes.

- At present, voting through postal ballots is available to the Service Voters
  - \* Service voters include the armed forces, those in a force covered by the Army Act,
  - \* those in the armed police force of a state who are serving outside the state
- Those on Poll Duty
  - \* Polling agents, Polling officer, Presiding officer, Public Servants due to their official commitments.
- As per Rule 18 of Conduct of Elections Rules, 1961, the electors under preventive detention are entitled to cast their votes by post but prisoners are not allowed to vote.
- Postal Ballots are counted first before EVM votes are taken up for voting.

##### Proxy Voting

- Proxy voting allows a registered elector to delegate his voting rights to a representative he nominates
  - \* The option of proxy voting is available only for armed forces, police, and government officials posted outside India.
  - \* The person can authorise another residing in the same polling booth area to cast a vote on his/her behalf.

- \* A service voter who opts for voting through a proxy is called Classified Service Voter (CSV).

- While wife can be enrolled in the part for Service Voter, husband/son/ daughter cannot be enrolled
  - \* Domestic servants accompanying diplomatic officers are not entitled to the postal ballot facility

##### Details

- On the recommendation of the Election Commission, the Ministry of Law and Justice has amended the Conduct of Election Rules, 1961, allowing senior citizens and person with disabilities in the absentee voter list.
- The poll officer concerned will attest Form 13A that senior citizens and persons with disabilities have to sign like others who vote through postal ballot.

#### **5. IPC-A road map for Criminal Justice Reforms**

##### Context

- The Union Home Ministry has recently requested Bureau of Police Research and Development to overhaul the British-era Indian Penal Code (IPC) and the Code of Criminal Procedure (CrPC)

##### Why is change a necessity?

- In colonial times, the primary function of police was to maintain the stability of the British Empire
  - \* In the British era, the police were raised to protect their interests, but now their duty is to protect the people
  - \* The purpose of the IPC and CrPC has shifted from preservation of the British Empire to the welfare of people, and this has to be reflected in the provisions and application of the code.
- The idea behind the overhaul is to change the "master-servant concept" envisaged in the IPC

##### Examples

- IPC has provided "uneven punishment for crimes of grievous nature".
  - \* For crimes such as snatching of chains or bags could be life-threatening in some cases, but the IPC does not provide punishment that is commensurate with the gravity of the crime
  - \* Currently awarding of these punishments depends the whims of the police, it is booked under robbery or theft. So a need for standardization is a must.
- The amendments introduced in the IPC have been ad hoc and reactive, in response to immediate circumstances
  - \* Like the 2013 amendment after the Delhi gangrape case.
  - \* After a long agitation Section 377 was decriminalised.



\* In another big verdict, the Supreme Court decriminalised adultery

- The IPC has provisions dealing with sexuality, procreation and marriage and the implications of the operation of this part of IPC raises complex issues of privacy and discriminatory application of law to men and women.

- The distinction between “culpable homicide” and “murder” was criticized even by Stephen as the “weakest part of the code”, as the definitions are obscure.

\* Example: Tabrez Ansari Case- In Jharkhand Mob Killing

- Having death penalty on statute book is also contrary to the ideas of humanizing criminal justice response and punishment for offender.

\* Keeping of death penalty in the IPC had a different objective in the beginning as the state wanted to profess a retributive stance and deterrent move for potential offenders and against the people joining mutiny.

\* All such reasons have now vanished and the presence of death penalty in master criminal law of India defies modern principles of penology and rehabilitation.

Even though the IPC has been haphazardly amended more than 75 times, no comprehensive revision has been undertaken in spite of the 42nd report of the law commission in 1971 recommending it. Hence, to bring this into action the home ministry has constituted two committees comprising legal luminaries for the purpose.

#### **Changes to be introduced should be clear**

- The reason for this decision, the direction the exercise should take, and the changes envisaged in the laws are not clear. Therefore, before introducing changes, the Home Ministry must first identify the provisions to be revised and provide a justification for doing so.
- The clarity required for the creation of new offences, reclassification or removal of existing offences, and changes to the quantum of punishment is missing from the discourse.

#### **Keeping principles in mind**

Criminal law is considered to be the most apparent expression of the relationship between a state and its citizens. Any revision of the IPC, therefore, needs to be done while keeping several principles in mind.

1. First, victimological underpinnings ought to be given a major thrust in reforming laws to identify the rights of crime victims.

- The launch of victim and witness protection schemes, use of victim impact statements, advent of victim advocacy, increased victim participation in criminal trials, enhanced access of victims to compensation and restitution all point towards the increased role of victims in the criminal justice system.

\* “Victims” means persons who, individually or collectively, have suffered harm, including physical or mental injury,

\* Victimology: The study of the victims of crime and the psychological effects on them of their experience.

2. Second, construction of new offences and reworking of the existing classification of offences must be informed by the principles of criminal jurisprudence which have substantially altered in the past four decades.

- For instance, liability questions in offences need a fresh look. Criminal liability could be graded better to assign the degree of punishments.
- New types of punishments like community service orders, restitution orders, and other aspects of restorative and reformatory justice could also be brought in this fold.

3. Third, the scheme of chapters and classification of offences can be drastically reworked.

- Offences like criminal conspiracy, sedition, offences against coin and stamps etc. must be abolished or replaced.
- Chapters of the IPC are overloaded at several places. It is unnecessary to have hundreds of sections in the category of property offences.
- Even the chapters on offences against public servants, contempt of authority, public tranquility, and trespass can be redefined and narrowed.
- New offences under a fresh classification scheme, like those suggested by the Malimath Committee on criminal justice reforms, can be introduced.
- Classification of offences must be done in a manner conducive to management of crimes in the future.

#### **Way Forward**

Criminal justice is directionless and in a state of policy ambiguity. India needs to draft a clear policy that should inform the changes to be envisaged in the IPC or CrPC.

- Unprincipled criminalisation must be avoided to save the state from dealing with too many entrants into the criminal justice system.

\* It often leads to not only the creation of new offences on unscientific grounds, but also arbitrariness in the criminal justice system.

- Guiding principles need to be developed after sufficient debate before criminalising an act as a crime.

- There is a need to have empirical legal research showing areas required to be contemplated as new offences in the code.

\* This project must be substantiated by empirical researchers and to be handled by professionals by undertaking extensive pre-legislative surveys.

- To be comprehensive enough, the IPC must also include chapters on cyber laws, economic offences, and terrorist offences in the code. This would be helpful in avoiding duplicity and confusion.
- Finally, these reforms will be of no consequence unless simultaneous improvements are made in the police, prosecution, judiciary and in prisons.

## 6. Police Commemoration Day

### Context:

- National Police Commemoration Day is observed every year on October 21 to remember the brave policemen who sacrificed their lives while discharging their duties.

### Details

- This day is observed in honor of ten CRPF men who laid down their lives fighting in the inhospitable terrain of Hot Springs in Ladakh.
- Chinese troops attacked twenty Indian policemen on 21st October 1959.
- The fighting that followed saw ten Indian men being killed.
- Seven others were taken captive by the Chinese but they managed to escape.
- Since then, this day is observed as the National Police Commemoration Day in honour of the martyred soldiers' valour and courage.
- In 2018, the Prime Minister inaugurated the first-ever National Police Memorial in Delhi on this occasion.
  - \* The underground museum is the first police museum of its kind in India, and showcases over 2000 years of policing in the region, since the time of Kautilya's system of law and order in 310 BCE.
  - \* It also commemorates the over 30000 police personnel from the central and state police forces who have died in the line of duty.

## 7. Sedition: On FIR against celebrities

### Context

- The police in Muzaffarpur district in Bihar have ordered for the closure of a sedition case against 49 eminent personalities for addressing an open letter to the Prime Minister on the need to stop hate crimes and lynching.
- The complaint has now been closed as false

### Details of the incident

- Sudhir Kumar Ojha, the lawyer who approached the magistrate, had produced no supporting documents, not even a copy of the letter signed by the writers, filmmakers and artists.
- Further, it would have been quite obvious that there was nothing in the appeal that promoted disaffection against the government or brought it into hatred and contempt.

- The complaint had further absurdities. It included penal provisions related to making imputations against national integration, public nuisance, affray and even trespassing into a burial ground

### The police have now decided to Book Complainant for Filing 'False' Case

- Section 182 of the IPC makes giving false information to a public servant with a view to causing injury or annoyance to another an offence punishable with a six-month jail term or a fine of ₹1,000.
- And under Section 211, making a false charge of an offence, knowing that there is no lawful ground for doing so, attracts a two-year prison term; and, if a more serious offence is alleged, the accuser may be jailed for even seven years.

### A lesson for the future

- In times when outrage, feigned or real, is used to accuse people of defamation, obscenity, cyber-insults and injuring religious sentiments, it would be wise to recall the Supreme Court's caution in *Khushboo vs. Kanniammal* (2010) in which the court quashed multiple private complaints against actor Khushboo for remarks on pre-marital sex with the observations, "It is not the task of the criminal law to punish individuals merely for expressing unpopular views" and that courts should not allow a criminal trial "triggered by false and frivolous complaints, amounting to harassment and humiliation to the accused."

## 8. Sikkim CM's disqualification

### Context

- The Election Commission of India (ECI) has cut short, the disqualification term of Sikkim Chief Minister Prem Singh Tamang.
- It has reduced Golay's disqualification period from six years to one year, making him eligible to contest the bypolls.

### Background

- Mr. Tamang was convicted under the Prevention of Corruption Act for misappropriating ₹9.50 lakh in the purchase of milch cows for distribution in 1996-97.
- His one-year prison term was upheld by the High Court and the Supreme Court. He went to jail and was released on August 10, 2018.
  - \* The disqualification of Mr. Tamang began on August 10, 2018 — the day he completed a year's jail term in the case.
  - \* It was to end on August 10, 2024

### Section 8 of Representation of People's Act 1951:

Section 8 deals with Disqualification of representatives on conviction for certain offences. It states that:



- Section 8 (1): A person convicted of an offence punishable under certain acts of Indian Penal Code, Protection of Civil Rights Act 1955, Unlawful Activities (Prevention) Act 1967, Prevention of Corruption Act 1988, Prevention of Terrorism Act 2002, etc. shall be disqualified, where the convicted person is sentenced to
  - \* In case of only fine – for a period of six years from the date of such conviction;
  - \* In case of imprisonment – from the date of such conviction and shall continue to be disqualified for a further period of six years since his release.
- Section 8 (2): A person convicted for the contravention of—(a) any law providing for the prevention of hoarding or profiteering; or (b) any law relating to the adulteration of food or drugs; or (c) any provisions of the Dowry Prohibition Act, 1961.
- Section 8 (3): A person convicted of any offence and sentenced to imprisonment for not less than two years [other than any offence referred to in sub-section (1) or sub-section (2)] shall be disqualified from the date of such conviction and shall continue to be disqualified for a further period of six years since his release.

#### Current Scenario

- He had not contested the Assembly election in the 2019 but took oath as chief minister on May 27 following his party's narrow victory over the Sikkim Democratic Front (SDF).
- In order to continue in office beyond six months, he must get elected to the Assembly by then.
- But the EC, reduced the period of six years to one year and one month. In other words, his disqualification ended on September 10.

#### How EC can reduce the period?

Section 11 of Representation of People's Act 1951:

- Section 11 deals with the removal or reduction of the period of disqualification.
  - \* The Election Commission may, for reasons to be recorded, remove any disqualification or reduce the period of any such disqualification.
  - \* It is an extraordinary power vested with the ECI, with the understanding that socio-economic-political factors may, in certain peculiar circumstances, warrant that the general disqualification prescribed by statutory rule can be removed/reduced.

#### What was the argument of Mr. Tamang?

- His main argument was that the law prevailing at the time of his offence entailed disqualification only if the sentence was for a term of two years or more; and that the amendment in 2003, under which any conviction under the anti-corruption law would attract the six-year disqualification norm, should not be applied to him.

#### Concerns

- The Election Commission (EC)'s order reducing the period of Sikkim Chief Minister Prem Singh Tamang's disqualification from electoral contest is morally wrong and a dangerous precedent that may end up reversing the trend towards decriminalising politics.
- The EC decision also goes against the grain of a series of legislative and judicial measures to strengthen the legal framework against corruption in recent years
- The apex court has described corruption as a serious malady and one impinging on the economy.
  - \* In 2013, the protection given to sitting legislators from immediate disqualification was removed.
  - \* Further, common sense would suggest that disqualification should be more strictly applied to those convicted for corruption.
  - \* Legislators handle public funds, and there is good reason to keep out those guilty of misusing them. The EC has failed to execute orders and prevent corruption

#### Conclusion

- The EC is already battling a perception that its actions are partisan.
- Its order in favour of Mr. Tamang, coming just a day after the BJP struck an alliance with the SKM for bypolls, is bound to further strain its credibility.

### **9. Supreme Court recalling its verdict diluting SC/ST anti-atrocities law**

#### Context

- The Supreme Court has recalled its directions in a March 20, 2018 verdict that had effectively diluted provisions of arrest under the Scheduled Castes & Scheduled Tribes (Prevention of Atrocities) Act, 1989.

#### Background

- The March 2018 decision of the SC laid down three new rules as safeguards against the Act's possible misuse:
  - \* That the bar on anticipatory bail under Section 18 need not prevent courts from granting advance bail;
  - \* That a person can be arrested only if the "appointing authority" (in the case of a public servant) or the SP (in the case of others) approves such arrest; and
  - \* That there should be a preliminary enquiry into all complaints.
- It caused an uproar among Dalits, and a nation-wide protest had turned violent in some places.
- The Centre then moved the petition in the Supreme Court seeking review of its 2018 judgment calling it "against the spirit of the Constitution".

### What was the arguments on which SC based its Judgment?

- The court made an assumption that SC/ST members are more likely to give false complaints than the general population (as evidenced by the fact that there is no preliminary enquiry or prior sanction for arrest envisaged for other complaints).
- The apex court had taken note of the rampant misuse of the stringent SC/ST Act against government servants and private individuals and said there would be no immediate arrest on any complaint filed under the law.
- It had said on "several occasions", innocent citizens were being termed as accused and public servants deterred from performing their duties, which was never the intention of the legislature

### Current Judgment

- A three-judge bench consisting of Justices Arun Mishra, MR Shah and B R Gavai in its ruling contended that the struggles of the scheduled tribe and scheduled caste communities are still not over in the country.
- The bench said SC/ST people still face untouchability, abuse and are being socially outcast.
- In accepting the review, Justice Mishra relied on the Statement of Objects & Reasons of the act and stated that "despite various measures to improve the socio-economic conditions of the Scheduled Castes and the Scheduled Tribes, they remain vulnerable. They are denied number of civil rights.
- They are subjected to various offences, indignities, humiliations and harassment. They have, in several brutal incidents, been deprived of their life and property".

### Conclusion

- The review is a timely reminder that the top court's power to pass any order required to uphold justice cannot be used to give directives contrary to existing laws or to supplant them altogether.

## **10. Why the Supreme Court must rethink capital punishment?**

### Context

- A three-judge bench of the Supreme Court confirmed the death sentence upon an individual who had been convicted of the rape and murder of a two-year old girl.
- The sentence was confirmed by 2:1 majority by a three-judge bench of Justices R. F. Nariman, Surya Kant and R.Subhash Reddy.

### Majority View and the Judgment

- The victim was barely a two-year old baby whom the convict kidnapped and apparently kept on assaulting over 4-5 hours till she breathed her last.

- The bench said that it is a case where trust has been betrayed and social values are impaired.
- The majority judgment held that the
  - \* "Convict had no control over his carnal desires (and) surpassed all natural, social and legal limits just to satiate his sexual hunger."
  - \* "He ruthlessly finished a life which was yet to bloom. The appellant instead of showing fatherly love, affection and protection to the child against the evils of the society, rather made her the victim of lust"

### Dissenting View

- Justice Reddy dissented and opined that case was based on Circumstantial Evidence and said that death sentence imposed on the appellant is modified to life imprisonment, without any remission.
- Justice Reddy, who agreed with the view of the majority judgment in upholding his conviction under various provisions of the Indian Penal Code (IPC) including rape, murder and unnatural offence, said it is not a fit case to award death penalty.
- "As such, it is clear that on the day of occurrence, the accused was under influence of liquor and he is aged about 25 years and he had no previous history of any crimes and in absence of any evidence from the side of the prosecution to show that he cannot be reformed and rehabilitated to bring in to the mainstream of the society"

### Structural Problems

The circumstances of the crime may trigger a natural reaction that the punishment was justified. A closer look at the judgment reveals that there are ongoing operational issues with the administration of capital punishment in the country, which raise questions about its continued retention on the statute books.

- \* Because of its very character, Indian courts have historically held that while circumstantial evidence can, in some cases, sustain a conviction, it should not ordinarily be the basis for imposing the death penalty.
- \* This was specifically pointed out by Justice RS Reddy, who dissented from the confirmation of the death penalty in this case.
- Second, one of the cardinal principles that has been evolved over time by the Indian courts, is that the death penalty is to be awarded taking into account not only the nature of the crime, but also, the character of the convict.
  - \* Given its irreversible character, the death penalty is to be imposed only when there is no possibility of reformation.
  - \* To establish this, courts have laid down a number of indicative factors, including mitigation reports that track a convict's behavior in jail, to judge whether or not he or she is capable of reform.

- And finally, the very fact of a dissent in this case – where two judges believed that the death penalty ought to have been imposed, and one did not – points to the inherent subjectivity that comes with such cases.

#### **Issues with the Judgment**

- People who have been imprisoned can be released, and potentially compensated if it turns out, years later, that the conviction was wrongful; nothing, however, can bring the dead back to life.
- It is for this reason that the absolute certainty involved in administering the death penalty sits ill at ease and sits even more ill at ease with a conviction based on circumstantial evidence.

#### **Conclusion**

- Admittedly, this problem is not unique to the imposition of the death penalty, but extends to sentencing and punishment in general. However, what is unique about the death penalty is precisely its irreversible character: Alone among all punishments, it is final and undoable.
- Given that, and given the kind of subjectivity that the Supreme Court's judgment reveals, there are surely good grounds to rethink the only form of punishment where human subjectivity and human error can never be atoned for.

#### **Circumstantial Evidence**

Evidence can be broadly divided into two sub- categories, direct and indirect circumstantial evidence.

- Direct evidence is evidence which explicitly establishes a fact or proves any assertions made by the party.
- Circumstantial evidence, also known as indirect evidence, is an unrelated chain of events which when put together formulates circumstances leading to the commission of the crime and can be used to derive a conclusion
  - \* Circumstantial evidence is supported by a significant amount of corroboration.
  - \* Convictions if based on circumstantial evidence require an unbreakable link between the criminal and the crime

#### **Example**

- Circumstantial evidence, by its very nature, requires the drawing of inferences to connect the evidence in question to a set of facts.
- For example, the evidence that an individual was "last seen" with a person who was murdered is "circumstantial evidence" that that individual was, indeed, the murderer.

### **11. Court sets aside order to try juvenile as adult**

#### **Context:**

A Delhi court has set aside the order of a Juvenile Justice Board (JJB) directing a Child in Conflict with Law (CCL) to face trial in a murder case as an adult.

#### **Salient features of the Juvenile Justice Act 2015:**

Children in conflict with the law:

- It treats all the children below 18 years equally, except that those in the age group of 16-18 can be tried as adults if they commit a heinous crime.
- A child of 16-18 years age, who commits a lesser offence (a serious offence), may be tried as an adult if he is apprehended after the age of 21 years.
- A heinous offence attracts a minimum of seven years of imprisonment. A serious offence attracts three to seven years of imprisonment and a petty offence is treated with three-year imprisonment.
- No child can be awarded the death penalty or life imprisonment.

Children in need of care and protection:

- It calls for setting up of Child Welfare Committees (CWCs) in each district with a chairperson and four other members who have experience in dealing with children.
- The committee decides whether an abandoned child should be sent to care home or put up for adoption or foster care.

Juvenile Justice Boards:

- The Act mandates setting up of Juvenile Justice Boards (JJBs) in each district with a metropolitan magistrate and two social workers, including a woman.
- The JJBs will conduct a preliminary inquiry of a crime committed by a child within a specified time period and decides whether he should be sent to rehabilitation centre or sent to a children's court to be tried as an adult.
- The board can take the help of psychologists and psycho-social workers and other experts to take the decision.

### **12. Vigilance Awareness Week**

- Vigilance Awareness Week is observed every year during the week in which the birthday of Sardar Vallabhbhai Patel (31st October) falls.
- The awareness week campaign affirms CVC's commitment to promotion of integrity and probity in public life through citizen participation.
- "Integrity- A way of life" has been chosen as the theme for the Vigilance Awareness Week 2019.
- The Commission believes that the theme would help draw the attention of all sections of society especially the youth to the significance of ethical conduct in the building of an honest, non-discriminatory and corruption free society.

**Details:**

- The establishment of 'Integrity Clubs' in schools and colleges is an initiative to cultivate ethical values in the leaders of tomorrow.
- "Awareness Gram Sabhas" are organized for dissemination of awareness in Gram Panchayats (in rural and semi-urban areas) to sensitize the rural citizens about the ill-effects of corruption.
- Seminars, discussions and other outreach events will be organized involving the private sector, professional associations, trade unions and associations for wide participation of all sections of civil society.

**Context:**

- The Central Vigilance Commission (CVC) will observe the Vigilance Awareness Week from 28th October to 2nd November, 2019.

# ECONOMY

## 1. Electric Vehicle (EV) Charging Guidelines and Specifications

### Context:

To boost Electric Vehicles in India, the Union Minister of State for Power and New & Renewable Energy (IC) has approved amendments in Electric Vehicle Charging Guidelines and Specifications.

### What are the new guidelines?

- In order to address the range of issues of electric vehicle owners, a phase-wise installation of an appropriate network of charging infrastructure throughout the country has been envisaged in the guidelines.
- It states that there must be at least one charging station in a grid of 3 x 3 km in all megacities and one charging station every 25 km on both sides of highways.
- To address concerns in inter-city travel and long-range and heavy-duty EVs, fast-charging stations for [vehicles] like buses/trucks shall be installed every 100 km.
- Private charging at residences/offices shall be permitted, with the decision of using fast or slow chargers resting with the consumers.
  - \* The first phase of the plan (1-3 years) will cover all megacities with a population of more than four million as per the 2011 Census, and all expressways and highways connected to these megacities.
  - \* The second phase (3-5 years) will cover other big cities such as State capitals.

### Objectives of electric vehicle charging infrastructure guidelines:

- To enable faster adoption of electric vehicles in India by ensuring safe, reliable, accessible and affordable Charging Infrastructure and eco-system.
- To promote affordable tariff chargeable from EV owners and Charging Station Operators/Owners.
- To generate employment/income opportunities for small entrepreneurs.
- To proactively support creation of EV Charging Infrastructure in the initial phase and eventually create market for EV Charging business.
- To encourage preparedness of Electrical Distribution System to adopt EV Charging Infrastructure.

## 2. Ease of Doing Business Index

- The World Bank Doing Business report was started in 2002.
- The report reviews business regulations and their enforcement
- The report looks at the regulatory environment for small and medium-sized companies to see how it hampers or helps them conduct business, from starting up and paying taxes to registering property and trading across borders.
- In this index, ranking of country is based on index averages the country's percentile rankings on 10 indicators each having equal weightage.
  - \* 10 indicators are starting business, getting electricity, dealing with construction permits, registering property, protecting investors, getting credit, employing workers, trading across borders, paying taxes, enforcing contracts and resolving insolvency.
  - \* 11th area – employing workers – is measured, but not factored into the score.
- A higher ranking of country in this list means that its regulatory environment is more conducive and favorable for the starting and operation of firms.

### Context

- In the latest ranking for countries in ease of doing business, the World Bank has placed India, 63rd out of 190 countries — an improvement of 14 places from its 77th position in 2018.

### Ranking

Progress card						* Ranking
As of May	2019	2018	As of May	2019	2018	
New Zealand	1	1	Norway	9	7	
Singapore	2	2	Sweden	10	12	
Hong Kong	3	4	India	63	77	
Denmark	4	3	China	31	46	
S. Korea	5	5	Russia	28	31	
U.S.	6	8	Brazil	124	109	
Georgia	7	6	Vietnam	70	69	
U.K.	8	9	Philippines	95	124	



### India's Performance

- India is ranked at 63rd position out of 190 countries, 14 places up from its 77th position in 2018.
- India is also featured, for the third consecutive year, in the list of 10 economies where business climates had improved the most.
  - \* This list comprises Saudi Arabia, Jordan, Togo, Bahrain, Tajikistan, Pakistan, Kuwait, China, India and Nigeria.
- India's improved ranking was on the back of four reforms: starting a business, dealing with construction permits, trading across borders and resolving insolvency.
- The report highlights improvements in the efficiency of acquiring building permits.
  - \* With regard to rankings based on construction permits alone, the position of Delhi's civic bodies improved from 181 in 2018 to 52 in 2019 to 27 this year.
- Imports and exports have become easier with a single electronic platform for trade stakeholders, among other things.
- The 'Resolving Insolvency' indicator, however, was mixed.
  - \* The report notes that reorganisation proceedings had been promoted in practice, a positive for the indicator, but resolving insolvency had also been made harder because dissenting creditors would receive less under reorganisation than under liquidation.
  - \* However, in the "resolving insolvency" category India's rank has improved from 108 to 52, with the overall recovery rate for lenders moving up from 26.5 cents to 71.6 cents to the dollar according to the World Bank.

India, along with other top improvers, implemented a total of 59 regulatory reforms in 2018-19, accounting for a fifth of all reforms recorded worldwide, stated the World Bank

### Is this report comprehensive?

- These rankings are based only on the performance of a few select cities, they are unlikely to reflect the ground realities of large swathes of vast economies like India.
- It should be borne in mind that the rankings are based on samples and audits done in Mumbai and Delhi only (the World Bank has said it would be covering Bengaluru and Kolkata too from next year).
- Starting, running or shutting down a business may be easier in Delhi and Mumbai compared to Coimbatore or Hyderabad where it is probably more difficult.
- It is not easy to streamline processes across the country given India's federal set up where States have a big say in several parameters that go into the ranking such as securing building permits, land approvals, electricity connections, registering assets, etc.

### What are the problem areas?

- The country lags in key metrics such as "Starting a business", "Enforcing contracts" and "Registering property".
  - \* "It takes 58 days and costs on average 7.8 per cent of a property's value to register it, longer and at greater cost than among OECD high-income economies.
- And it takes 1,445 days for a company to resolve a commercial dispute through a local first-instance court, almost three times the average time in OECD high-income economies," stated the release.

### Conclusion

- Yes India has achieved some success. But this is limited. Going forward the rise in rankings from hereon will depend on how much the Centre is able to convince the States to reform their systems.

## **3. GDP is a means, not an end**

### Context

- MIT economists Abhijit Banerjee and Esther Duflo, who, along with Michael Kremer, won the 2019 Nobel Prize for Economics for their "experimental approach to alleviating global poverty", have published a new book, Good Economics for Hard Times.
- In this article we will be looking at important pointers for revival of economy.

### A comparison of India and China

According to Nobel Laureates Growth in India, like that in China, will slow.

- When China was at the same level of per capita GDP as India is today, it was growing at 12% per year, whereas India thinks of 8% as something to aspire to.
- If we were to infer from that, India is placed at a much lower level of per capita GDP than China.

### Middle Income Trap

World Bank Classification

- The World Bank classifies the world's economies into four income groups — high, upper-middle, lower-middle, and low.
- It bases this assignment on Gross National Income (GNI) per capita (current US\$) calculated using the Atlas method.

### Updated Thresholds

- New thresholds are determined at the start of the World Bank's fiscal year in July and remain fixed for 12 months regardless of subsequent revisions to estimates.

Threshold	July 2019/\$ (new)	July 2018/\$ (old)
Low income	< 1,025	< 995
Lower-middle income	1,026 - 3,995	996 - 3,895
Upper-middle income	3,996 - 12,375	3,896 - 12,055
High income	> 12,375	> 12,055

### Trap

- This is a risk that emerging economies are said to be vulnerable to.
- As a country runs out of new sources of growth after an initial burst of rapid expansion, it finds itself unable to break into a higher-income league.
- Middle-Income Trap crystalizes the notion that growing rapidly can become more difficult after a country moves up from low income to middle income.
- The transition from middle income to high income is inherently more challenging than the transition from low income to middle income

According to the World Bank, of 101 middle-income economies in 1960, only 13 had become high income by 2008. Malaysia, Thailand, Egypt, Mexico and Peru all seem to have trouble moving up.

- But India need not worry, but take this as a warning and bring about changes in the overall structure of its economy.
- India has some of the sectors which are yet to be explored and the entrepreneurial genius needs to be recognised and revived to discover the unexploited opportunities
- India should understand from history about Pro rich, anti-poor Policies not helping the revival of economy.
  - \* In the U.S. and U.K. in the Reagan-Thatcher era to preserve growth they introduced "business friendly" policies and environment.
  - \* This enriched the top earners at the cost of everyone else, and did nothing for growth.
  - \* If the U.S. and U.K. experience is any guide, asking the poor to tighten their belts, in the hope that giveaways to the rich will eventually trickle down, it does nothing for growth and even less for the poor.
  - \* Interestingly, even the IMF, so long the bastion of growth-first orthodoxy, now recognises that sacrificing the poor to promote growth was bad policy.

### The ultimate goal

- The key, ultimately, is to not lose sight of the fact that GDP is a means and not an end. A useful means, no doubt, especially when it creates jobs or raises wages or plumps the government budget so it can redistribute more.
- But the ultimate goal remains one of raising the quality of life of the average person and especially the worst-off person.
- And quality of life means more than just consumption. While better lives are indeed partly about being able to consume more, even very poor people also care about the health of their parents, about educating their children, about having their voices heard, and about being able to pursue their dreams.

### Conclusion

- The best bet, therefore, for a country like India is to attempt to do things that can make the quality of life better for its citizens with the resources it already has: improving education, health and the functioning of the courts and the banks, and building better infrastructure (better roads and more liveable cities, for example).
  - \* The solutions must be formed with bottom-up perspectives of citizens on the ground, rather than top-down perceptions of investors and policymakers
- For the world of policymakers, this perspective suggests that a clear focus on the well-being of the poorest offers the possibility of transforming millions of lives much more profoundly than we could by finding the recipe to increase growth from 2% to 2.3% in the rich countries.

## **4. Global Competitiveness Index**

- It is released annually by the WEF.
- The World Economic Forum, which has been measuring countries' competitiveness since 1979, defines competitiveness as: "the set of institutions, policies and factors that determine the level of productivity of a country."
- The basic notion behind the GCI is to map the factors that determine the Total Factor Productivity (TFP) in a country.
  - \* The TFP is essentially the efficiency with which different factors of production such as land, labour and capital are put to use to create the final product.
  - \* It is believed that it is the TFP in an economy that determines the long-term economic growth of a country.
- It measures the performance of countries according to 114 indicators that influence a nation's productivity.

- The index is calculated by aggregating indicators across 12 pillars in the report which covers both business and social indicators.

\* However o These 12 pillars are divided into four index components

#### Enabling Environment

	Pillar 1 Institutions
	Pillar 2 Infrastructure
	Pillar 3 ICT adoption
	Pillar 4 Macroeconomic stability


#### Human Capital

	Pillar 5 Health
	Pillar 6 Skills

#### Markets

	Pillar 7 Product market
	Pillar 8 Labour market
	Pillar 9 Financial system
	Pillar 10 Market size

#### Innovation Ecosystem

	Pillar 11 Business dynamism
	Pillar 12 Innovation capability

- Countries' scores are based primarily on quantitative findings from internationally recognized agencies such as the International Monetary Fund (IMF) and World Health Organization (WHO), with the addition of qualitative assessments from economic and social specialists and senior corporate executives.

#### Significance of the Report

- The Global Competitiveness Report is a tool to help the governments, private sector and civil society organizations to work together to boost productivity and generate prosperity across the globe.
- It gives an understanding of comparative analysis between countries and allows leaders to gauge areas that need strengthening and to build coordinated responses.
- It further helps to identify best practices around the world and informs about the domestic level performance.

#### Context

- India has moved down 10 places to rank 68th on an annual global competitiveness index
  - \* India's overall score is 61, and it is ranked at 68th position, below the last year's rank of 58.
- The latest edition covered 141 economies, accounting for over 98% of the world's GDP.

#### How are countries ranked?

- According to the report, "a country's performance on the overall GCI results as well as each of its components is reported as a 'progress score' on a 0-to-100 scale, where 100 represents the 'frontier', an ideal state where an issue ceases to be a constraint to productivity growth".

- For example, the average GCI score across the 141 economies that were studied this year was 60.7. This means that the 'distance to the frontier' stands at almost 40 points.

#### How did India fare?

- India's 2019 overall score (61.4) fell by merely 0.7 when compared to its 2018 score. But this slippage was enough for it to slide down 10 ranks in the list.
- In South Asia, India, in 68th position, loses ground in the rankings despite a relatively stable score, mostly due to faster improvements of several countries previously ranked lower
- India trails China (28th, 73.9) by 40 places and 14 points
- But within South Asia (see chart), it is the best performer and is followed by Sri Lanka (the most improved country in the region at 84th), Bangladesh (105th), Nepal (108th) and Pakistan (110th).

#### Global Ranking

- Singapore has become the world's most competitive economy in 2019, pushing the US to the second place. Hong Kong SAR is ranked 3rd, Netherlands is 4th and Switzerland is ranked 5th.
- Countries which are/have been performing very poorly are Chad, Yemen, Democratic Republic of Congo, Haiti and Mozambique.

#### Conclusion

- With growing innovation capacity in emerging economies, India should better focus on balancing the technical integration and human capital investments for global employment across developed countries.

## 5. GM cottonseeds approved as food by U.S. regulators

### Context

- U.S. regulators gave the green light for genetically modified cotton to be used for human consumption, paving the way for a protein-packed new food source — edible cottonseed that tastes a bit like chickpeas

### Details

- It was developed by Texas A&M University scientists
- Ordinary cottonseed is unfit for humans and many animals to eat because it contains high levels of gossypol, a toxic chemical.
  - \* It lowers blood potassium to dangerous levels, resulting in fatigue and even paralysis
  - \* But the research team has used RNAi, or RNA interference, technology to “silence” a gene, virtually eliminating gossypol from the cottonseed.
  - \* Gossypol was left at natural levels in the rest of the plant because it guards against insects and disease.
- It can be eaten as food for people and all types of animals.

### Significance

- The genetic modification does not affect the plant's fiber for use in textiles
- It could help tackle global malnutrition.

## 6. Khadi and Village Industries Commission

### Context:

- The Khadi and Village Industries Commission (KVIC) and the Goa State Government have joined hands with an aim to generate employment opportunities in Goa.

### About the Khadi and Village Industries Commission (KVIC):

- KVIC is a statutory body established by an Act of Parliament in 1956.
- The body is charged with the planning, promotion, organisation and implementation of programs for the development of Khadi and other village industries in the rural areas in coordination with other agencies engaged in rural development wherever necessary.
- Objectives of KVIC:
  - \* The social objective of providing employment.
  - \* The economic objective of producing saleable articles.
  - \* The wider objective of creating self-reliance amongst the poor and building up of a strong rural community spirit.
- Its functions also comprise building up of a reserve of raw materials and implements for supply to producers, creation of common service facilities for processing of raw materials as semi-finished goods and provisions of facilities for marketing of KVI products.

- It also imparts training to artisans engaged in these industries.
- It also engages in research of production techniques and equipment employed in the Khadi and Village Industries sector.
- It also provides financial assistance to institutions and individuals for the development and operation of Khadi and village industries and guides them through the supply of designs, prototypes and other technical information.
- It functions under the Ministry of Micro, Small and Medium Enterprises, and is headquartered in Mumbai.

### What is Khadi?

Khadi, also called khaddar, is a hand-spun, hand-woven natural fibre cloth. It is woven from cotton. It may also include silk or wool. It originates from India and Bangladesh. It is associated with the freedom struggle and Mahatma Gandhi, who urged people to use Khadi and ditch foreign imported cloth.

## 7. MeitY Start-up Summit

### Context:

- The Ministry of Electronics & Information (MeitY) held its first Start-up Summit at New Delhi.

### Details

- The summit, conducted by the MeitY brings key stakeholders and start-ups under one roof.
- The objective is to provide an environment where entrepreneurs and start-ups can share strategies and techniques that they find effective with one another.
- Further, they will work with practitioners to capture viable techniques to bring the focus of venture capitalists and the government around their processes and strategies.
- The vision of the summit is to discuss how leveraging emerging technologies like artificial intelligence (AI) and the internet of things (IoT) would catalyse the socio-economic growth of India.
- The MeitY Startup Hub (MSH) was also launched at the Summit.
  - \* The startup hub has been set up in order to facilitate the MeitY's vision of promoting technology innovation, startups and the creation of intellectual properties.
  - \* The Software Technology Parks of India (STPI), an organisation under the MeitY, is entrusted with the implementation of MSH in the country.

## 8. Microfinance Institutions- RBI raises lending limit

### Context

- The Reserve Bank of India has raised the lending cap for microfinance institutions to improve credit availability in rural and semi-urban areas.



## Background

- The RBI board set up a sub-committee in 2011, under the chairmanship of Y.H. Malegam, to study issues and concerns relating to the microfinance industry after a microfinance crisis in Andhra Pradesh in 2010.
- In its report, the committee defined the industry as the following: "Microfinance is an economic development tool whose objective is to assist the poor to work their way out of poverty. It covers a range of services which include, in addition to the provision of credit, many other services such as savings, insurance, money transfers, counselling, etc."
- As a consequence of the Malegam committee report, RBI decided to set up a separate category of non-banking financial institutions: Non-banking financial company-micro finance institution (NBFC-MFI), and a detailed regulatory framework was laid down for this category in 2011.

## Details

- RBI said borrowers with annual household income up to Rs 1.25 lakh in rural areas would now be eligible to take micro loans while the threshold limit was Rs 1 lakh earlier.
- Similarly, income limit has been raised to Rs 2 lakh from Rs 1.6 lakh for borrowers in urban and semi urban pockets.

This means it will now allow all the borrowers having a household income of ₹2 lakh in urban/semi urban areas and ₹1.25 lakh in rural areas will be eligible for loans from MFIs, which are uncollateralised.

## Significance of the move:

- This change will provide more room for NBFC-MFIs to lend and allow more households access to credit.
- Microfinance lenders will use this increased limit to continue to lend to the over 50 million borrowers.
- The decisions would provide a shot in the arm to the country's microfinance sector as they could cater to a wider market now.
- RBI has been trying to expand the scope and reach of credit in the economy to stimulate aggregate demand and to sustain the growth impetus.

## **9. MGNREGA-Government to peg wages to inflation**

### Context

- Staring at a slump in rural demand and a slowdown in the rural economy, the Centre plans to inject more money into the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme by linking wages under the Act to an updated inflation index, which will be revised annually.
- It hopes this will increase wages, thus increasing purchasing power and reviving rural demand.

## Issues with MGNREGA

- MGNREGA workers get paid much lower than market rates.
  - \* The national average wage of an MGNREGA worker is ₹178.44 per day, less than half of the ₹375 per day minimum wage recommended by a Labour Ministry panel earlier this year in 2019.
  - \* The Base Rate is low for MGNREGA, so it may not be enough to link it to inflation
- The consumption basket of CPI-AL [which determines MGNREGA wage revisions] has not been updated for more than three decades, and rural consumption patterns have changed drastically in that time
  - \* Food items make up more than two-thirds of the CPI-AL consumption basket, but rural workers today spend a much smaller percentage of their money on subsidised food, and an increasingly larger amount on health, education and transport costs.

Minimum wages are neither a dole nor an act of charity. They are a legal mandate that are arrived at by calculating the minimal nutritional requirement and basic needs of an individual.

- In fact, the Fair Wages Committee of the Ministry of Labour (1949) noted in a progressive report that a "living wage" should also include education, healthcare and insurance besides the bare essentials.
- In Sanjit Roy v. State of Rajasthan (1983), the Supreme Court held that paying less than minimum wages is akin to "forced labour".
- In Workmen v. Management of Raptakos Brett (1991), it said "living wage" is important to ensure basic dignity of life.

## Future Course

Indices are (weighted) averages of the prices of a basket of goods consumed and the index must be based on the main items of consumption for rural households.

- NREGA daily wages are to be indexed with an updated inflation index called the Consumer Price Index-Rural (CPI-R) instead of the older Consumer Price Index-Agricultural Labourers (CPI-AL).
  - \* The calculation of CPI-AL involved more food items in the consumption basket
  - \* While the calculation of CPI-R involves more non-food items such as healthcare and education. CPI-R better reflects the rural consumption basket compared to CPI-AL.
- Although this new indexation is critical, it will have a sizeable impact on increase in rural incomes only if the base NREGA wages are high.
  - \* For example, let's assume a 10% increase in wages due to the new indexation. Then NREGA wages in Kerala at ₹271 per day, one of the highest, would become ₹298.



- \* However, if NREGA wages were equal to the State minimum wages, the wages in Kerala would increase from ₹490 to about ₹540.
- \* A substantial increase in NREGA wages and subsequent indexation with CPI-R would be meaningful for the workers and the economy.

- \* Also, the landlord cannot hike the rent in the middle of the tenure.

- A landlord cannot cut off or withhold essential supplies or services such as electricity and water under the new Act. The property owner must give prior notice of three months before revising the rent value.
- The tenant cannot sublet a part of or the whole property to someone else.
- The draft also makes it the landlord's responsibility to rectify structural damages and undertake measures like whitewashing walls and painting doors and windows.
- MTA stipulates a robust Grievance Redressal Mechanism comprising of Rent Authority, Rent Court and Rent Tribunal.

## 10. Model Tenancy Act, 2019

### Context

- A draft of the Model Tenancy Act, 2019, was released by the Ministry of Housing and Urban Affairs (MHUA) in July 2019.

### Why an Act?

- Pointing to the Census 2011 count of 1.1 crore houses lying vacant, an MHUA statement said the Model Act would bring these into the rental market, and would promote the growth of the rental housing segment
- One of the potential measures to unlock the vacant house is to bringing transparency and accountability in the existing system of renting of premises and to balance the interests of both the property owner and tenant in a judicious manner.

### Objective

- The Draft Act is aimed at increasing accountability in the rental home ecosystem. It addresses factors like the need to have a formal rent agreement, how much security deposit should be paid, rate of rent increase and grounds for eviction.
- The Act aims to promote rental housing and 'balance the interests' of landowners and tenants.
- It covers residential and non-residential properties

### Important Features

- The Model Act provides for its applicability for the whole of the State i.e. urban as well as rural areas in the State.
- After coming into force of this Act, no person shall let or take on rent any premises except by an agreement in writing.
- A Digital Platform will be set up in the local vernacular language of the State for submitting tenancy agreement and other documents.
- According to the new draft Model Tenancy Act, 2019, security deposit has been capped to a maximum of two months' rent in case of residential property, and a minimum of one month's rent in the case of non-residential property.
- The draft imposes penalty for failure to vacate a residential unit.
  - \* The landlord is entitled to get a compensation of double the monthly rent for two months and four times of the monthly rent thereafter if a tenant does not vacate the premises after tenancy has been terminated by order, notice or as per agreement.

### Significance

- It will help overhaul the legal framework vis-à-vis rental housing across the country.
- The move could provide relief for both tenants and landlords and help take some load off India's overburdened litigation process.
- It is also expected to give a fillip to private participation in rental housing for addressing the huge housing shortage across the country.
- The Act is laudable insofar as it provides for the constitution of Rent Courts and Tribunals.
  - \* Thousands of rent cases clog the lower judiciary and the process is lengthy and time-consuming.
  - \* The Act provides for a time-bound process with dedicated courts for tenants and landlords.

### Challenges

- The problem is that the jurisdiction or power of these courts to hear cases is limited to the tenancy agreement submitted to the Rent Authority.
  - \* On the one hand, this implies that all future tenancies that have been submitted to the Rent Authority shall be eligible to approach these courts.
  - \* On the other hand, older tenancies and informal tenancies will still not fall under its jurisdiction.
  - \* Thus, the twin problems of resolving older disputes and informal arrangements will continue.
- The Model Tenancy Act, fails to take into account that a majority of tenancies in India are informal
  - \* These agreements are based on trust, word of mouth, and social kinship networks.
- Experts warn that the Model Tenancy Act, 2019 may lose its real purpose if states do not follow the basic guidelines and dilute them.

- \* This is because the Central government may lay down the basic policies but the exact rules will likely change within each state since land is a state subject

### So, how can the Act be made more effective?

1. The Act needs to focus on the upper end of the housing market in order to make a difference in the lower end of the market.

- It is known that vacancy — i.e., housing kept vacant for various reasons — is higher in the upper segments of the housing market.
- For instance, across urban India, vacancy rates in urban areas is 10.1% while in slums it is 7.3%.
- Usually what one sees is empty apartment projects in our cities, but rarely an unoccupied slum or low-income colony.
- Thus, an effective implementation of the Act in the upper segments of the housing market will allow some of these vacant houses to enter the rental market and serve to relieve the massive amount of pressure and demand on the lower segments.

2. Second, even in letter the Act needs to differentiate between commercial tenancies that attract a lot more institutional investment and residential tenancies that are largely held between individuals and households.

- The two markets are very different from each other. Even in development policy, the outcomes required of the two sectors are entirely different —
  - \* while commercial real estate underpins economic development,
  - \* Residential arrangements in urban areas offer security of tenure and access to livelihoods, health and education.
- The two cannot be dealt with in a similar manner as it would be under this Act.

3. A last but critical move will be to increase the supply of formal affordable rental housing — housing that can actually fall under the purview of the model Act.

- This requires investment on the part of the Central and State governments.
- Additionally, prior experience has shown that publicly provided rental housing will need structured efforts in management, planning and design in order to achieve its inclusive agenda.
- Thus there is a case for the Central and State governments to develop schemes for the supply of formal affordable rental housing.
- As per the experience of various countries, this could be in the form of housing built to rent for migrants, low-wage informal and formal workers, and students; rent-to-own housing for unsteady low-wage households; and even rental housing allowances/ vouchers for the most marginalised in the housing market.

### Way Forward

- To address the housing crisis and to ensure secure tenures for low-income households, the Act needs a wider ambit along with renewed efforts and investments.

### 11. National E-assessment Centre (NeAC)

- The NeAC will be an independent office looking after the exclusive work of e-assessment.
- It is setup in the national capital as part of the government's ambitious plan to launch faceless and nameless assessment for income tax payers
- The Central Board of Direct Taxes (CBDT), that frames policy for the Income-tax department, has issued an order for the creation of the Centre.

### Structure

- The Centre will have 16 officials and will be headed by a Principal Chief Commissioner of Income-tax (PCCIT) as its chief.
- There are 8 Regional e-Assessment Centres (ReAC) set up at Delhi, Mumbai, Chennai, Kolkata Ahmedabad, Pune, Bengaluru and Hyderabad which would comprise Assessment unit, Review unit, Technical unit and Verification units.
- Each ReAC will be headed by Chief Commissioner of Income Tax (CCIT). Cases for the specified work shall be assigned by the NeAC to different units by way of automated allocation systems.

### What is it?

- People file income tax returns for the year on the basis of their calculations. But sometimes the tax department disagree with our calculations.
- Usually, a few months after filing the returns, the department sends to all assesses an intimation under Section 143(1) of the Income Tax Act, showing side by side the computation of income tax as done by the assessee as well as by the department.
  - \* A discrepancy often means a demand for more taxes, which you may have to pay up.
- Beyond this, if sometimes the tax authorities consider it necessary to ensure that the assessee has not understated income, computed excessive loss or underpaid taxes, they will serve a notice under Section 143(2), requiring the assessee to meet the assessing officer on a particular date and/or produce any evidence in support of the return. This is commonly called 'Scrutiny Assessment'.
- It is this personal interface between the tax department and the taxpayer that is being made online — or 'faceless' — now.

### How will it work?

- Under the new system, taxpayers will receive notices on their registered e-mails as well as on registered accounts on the web portal [www.incometaxindiaefiling.gov.in](http://www.incometaxindiaefiling.gov.in).

- They will also receive real-time alerts by way of SMS on their registered mobile number, specifying the issues for which their cases have been selected for scrutiny.
- The replies to the notices can be prepared at ease by the tax payers at their own residence or office and be sent by email to the National e-Assessment Centre by uploading the same on the designated web portal

### Significance

- E-assessment helps in bringing greater transparency and accountability to the scrutiny process. It reduces the scope for bias or corruption on the part of the assessing officer.
- By doing away with the need to present yourself at the tax office helps avoid the hassles and costs associated with travel.
- Problems such as non-receipt or delayed delivery of notice or inability to be present at hearings due to other emergencies will no longer arise, as the process is online.
- The setting up of NeAC is a step for better taxpayer service, reduction of taxpayer grievances in line with the Prime Minister's vision of 'Digital India' and promotion of ease of doing business
- The scheme introduces team-based assessment as well as dynamic jurisdiction, under which cases from one part of the country can be handled in any other part.
- Functional specialisation as only one agency dealing with faceless assessment
- Expeditious disposal of cases
- Standardisation and quality management

### Context

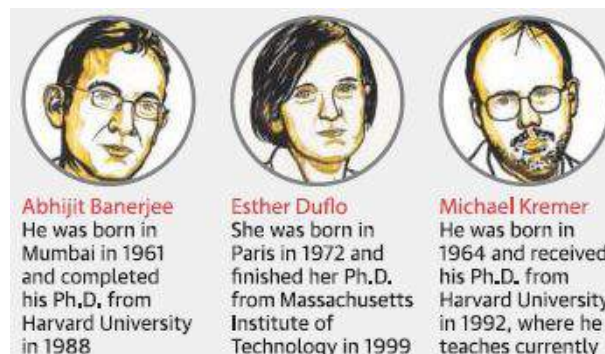
- Finance Minister inaugurated the Income Tax Department's National E-assessment Centre (NeAC)

## **12. Nobel for Abhijit (Economics of poverty)**

### Context

- The Royal Swedish Academy of Sciences has decided to award the 2019 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, popularly called the Nobel Prize in Economics, to Abhijit Banerjee, Esther Duflo, and Michael Kremer "for their experimental approach to alleviating global poverty".
- This is only the second time a woman has bagged the prestigious award and it is a first for a husband-wife duo to win in this discipline — Mr. Banerjee is married to Ms. Duflo.

### Educational Profiles



- He previously studied at the Jawaharlal Nehru University, New Delhi, and Presidency College, which was then affiliated with the University of Calcutta.
- He is currently the Ford Foundation International Professor of Economics at the Massachusetts Institute of Technology (MIT).

### Why have Banerjee, Duflo, and Kremer won the Nobel Prize?

- In Poor Economics, Banerjee and Duflo bemoaned how the debates on poverty "tend to be fixated on the 'big questions': What is the ultimate cause of poverty? How much faith should we place in free markets? Is democracy good for the poor? Does foreign aid have a role to play? And so on".
- Banerjee, Duflo and Kremer, who have been working together since the mid-1990s, are different in that they do not get stuck with the "big questions". Instead, they break down a problem, study its different aspects, conduct various experiments and, based on such "evidence", decide what needs to be done.
- Thus, instead of looking for the silver bullet to prop up the 700 million people globally who still live in extreme poverty, they look at the various dimensions of poverty — poor health, inadequate education, etc.
  - \* They then drill down further on each of these components.
  - \* Within poor health, for instance, they look at nutrition, provisioning of medicines, and vaccination, etc.
  - \* Within vaccinations, they try to ascertain "what works" and "why".

### How does this approach work in practice?

"The lack of a grand universal answer might sound vaguely disappointing, but in fact it is exactly what a policy maker should want to know — not that there are a million ways that the poor are trapped but that there are a few key factors that create the trap, and that alleviating those particular problems could set them free and point them toward a virtuous cycle of increasing wealth and investment," Banerjee and Duflo said in Poor Economics.

Breaking down the poverty problem and focussing on the smaller issues such as “how best to fix diarrhoea or dengue” yielded some very surprising results.

- For instance, it is often believed that many poor countries (like India) do not have the resources to adequately provide education, and that this resource crunch is the reason why school-going children do not learn more. But their field experiments showed that lack of resources is not the primary problem.
  - \* In fact, studies showed that neither providing more textbooks nor free school meals improved learning outcomes.
  - \* Instead, as was brought out in schools in Mumbai and Vadodara, the biggest problem is that teaching is not sufficiently adapted to the pupils’ needs.
  - \* Similarly, on tackling teacher absenteeism, what worked better was to employ them on short-term contracts (which could be extended if they showed good results) instead of having fewer students per “permanent” teacher, in order to reduce the burden on teachers and incentivise them to teach.

They then showed that these smaller questions could be best answered through carefully designed experiments among the people who are most affected. This thought process has resulted in what are called Randomised Control Trials (RCT)

#### **And what is their “new experiment-based” approach?**

So if one wanted to understand whether providing a mobile vaccination van and/or a sack of grains would incentivise villagers to vaccinate their kids, then under an RCT, village households would be divided into four groups.

- Group A would be provided with a mobile vaccination van facility,
- Group B would be given a sack of foodgrains,
- Group C would get both, and
- Group D would get neither.

Households would be chosen at random to ensure there was no bias, and that any difference in vaccination levels was essentially because of the “intervention”.

Group D is called the “control” group while others are called “treatment” groups.

#### **Significance of such approach**

- Such an experiment would not only show whether a policy initiative works, but would also provide a measure of the difference it brings about.
- It would also show what happens when more than one initiatives are combined.
- This would help policymakers to have the evidence before they choose a policy.

#### **Is there a flip side to RCTs?**

- The use of RCTs as the provider of “hard” and incontrovertible evidence has been questioned by many leading economists — none more so than Angus Deaton, the winner of the Economics Nobel in 2015, who said “randomisation does not equalise two groups”, and warned against over-reliance on RCTs to frame policies.
- While randomly assigning people or households makes it likely that the groups are equivalent, randomisation “cannot guarantee” it. That’s because one group may perform differently from the other, not because of the “treatment” that it has been given, but because it has more women or more educated people in it.
- More fundamentally, RCTs do not guarantee if something that worked in Kerala will work in Bihar, or if something that worked for a small group will also work at scale.

#### **Other Findings**

- One of the major discoveries by Dr. Banerjee and Dr. Duflo was that, in developing countries, there is often a stark difference between the technology and practices used by companies within the same economy and sector. That is, in developing economies, some companies use the latest technology and practices, while others in the same country and sector use outdated production methods.
- This within-sector differences are less stark in developed economies, they found.
- Banerjee and Duflo further argued that these misallocations can be traced back to various market imperfections and government failures
- Hence, a core step in understanding, and ultimately alleviating, poverty is to identify sources of the observed inefficiencies as well as policies that could address them

#### **Way forward**

- Governments across the world, including in India, spend big money on social schemes without the vaguest of ideas on whether their objectives have been met.
- The Field-Work Based Approach that these economists have perfected has revolutionized the field of development economics and made it more relevant in policy making.
- The government would do well to borrow from the research of these laureates to understand the impact of its several schemes, and where necessary, tweak them to derive maximum benefit for the thousands of crores of rupees that it spends.



### **13. PFRDA permitted now Overseas Citizen of India to enroll in NPS at par with Non-Resident Indians**

#### **Context:**

- The Pension Fund Regulatory and Development Authority (PFRDA) has now permitted Overseas Citizen of India (OCI) to enroll in National Pension Scheme (NPS) at par with Non-Resident Indians.

#### **Details:**

- The Department of Economic Affairs has specified that an OCI may subscribe to the National Pension System governed and administered by PFRDA, provided such person is eligible to invest as per the provisions of the PFRDA Act and the annuity/accumulated saving will be repatriable, subject to FEMA guidelines.
- Now, any Indian citizen, resident or non-resident and OCIs are eligible to join NPS till the age of 65 years.

#### **About Pension Fund Regulatory and Development Authority (PFRDA):**

- It is the statutory authority established by an enactment of the Parliament, to regulate, promote and ensure orderly growth of the National Pension System (NPS) and pension schemes to which this Act applies.
- It is the pension regulator of India which was established by the Government of India on 23 August 2003.
- It was authorised by the Department of Financial Services, Ministry of Finance.

### **14. Title Insurance**

#### **What is title insurance?**

- Title insurance refers to insurance for the title of a real estate property and is mandatory, according to the Real Estate (Regulation and Development) Act 2016.
- Title, in simple terms, denotes who the owner of the property is.
- This speciality insurance product provides indemnity to property developers and the subsequent owners of the property against losses and risks related to defects in property title arising out of third party challenges not discovered before the policy takes effect.

#### **The need**

- Take for instance a property in South Mumbai for which you would have paid Rs 3 crore.
  - \* After one year, you find out that the developer owes money to a lender for this piece of land and your entire building is in fact hypothecated to the bank.
  - \* As an investor you have no other option but to vacate the property.
- However, in case the developer bought a title insurance policy, he would be liable to pay you compensation in order for you to look for temporary accommodation.

- This also comes handy when ailing real estate projects of one developer are taken over by another developer. The title of the property is often marred in controversy in such cases, and, for the end buyer, it is a risky proposition.

#### **What will it pay for?**

- The insurance product comes into force from the time a project is set up. If there is litigation related to a property due to financial issues or inaccuracies in the land ownership documents, the end land buyer is at a loss.
- When a court case is filed and the project completion is delayed, the title insurance will provide compensation to the buyer of the property.
- An inordinate delay in construction may also hamper the market value of the real estate project. The policy will provide compensation in the case of delay resulting in price erosion as well.

#### **Context:**

- The Insurance Regulatory and Development Authority of India has constituted a working group that will revisit the product structure of title insurance.

#### **The terms of reference of the working group are as under:**

- To examine the Legal and Regulatory Framework in place and its impact on the marketability of title insurance in India.
- To study the structure of title insurance products available in the current Indian market and analyse the reasons for sluggish demand.
- To develop a standard title insurance product suitable to Indian market and recommend measures to spur the demand for the product.
- To suggest augmentation of reinsurance capacity within the domestic market.
- To examine any other aspect relating to title insurance products in India.

### **15. Sahyatri Mobile App**

- The Indian Railways has launched a website and mobile app that allows passengers to register their complaints online.
- The Sahyatri app will help railway passengers find out the jurisdiction of a police station and the details of Government Railway Police (GRP) officials by geo-tagging with Google Maps.
- It will also have the facility to scan and read QR codes and make an emergency call.
- The database of criminals, including their photographs, active in railways' jurisdiction all over India would be uploaded on the website.
- The website will facilitate crime detection by integrating the criminal database online.



## 16. World Cotton Day

- The World Cotton day is celebrated on 7 October as a global celebration of cotton and its stakeholders, from field to fabric and beyond.
- It will celebrate the many advantages of cotton, from its qualities as a natural fibre, to the benefits people obtain from its production, transformation, trade and consumption.

### World Cotton Day 2019

- At the initiative of the Cotton-4 (Benin, Burkina Faso, Chad and Mali), the World Trade Organisation made the launch of World Cotton Day on 7 October 2019.
- The event is organised in collaboration with the Secretariats of the United Nations Food and Agriculture Organization (FAO), the United Nations Conference on Trade and Development (UNCTAD), the International Trade Centre (ITC) and the International Cotton Advisory Committee (ICAC).

### The annual event aims to

- Give exposure and recognition to cotton and all its stakeholders in production, transformation and trade.
- Engage donors and beneficiaries and strengthen development assistance for cotton.
- Seek new collaborations with the private sector and investors for the cotton-related industries and production in developing countries.
- Promote technological advances, as well as further research and development on cotton.

## 17. Youth Co: Lab

- Co-created in 2017 by UNDP and the Citi Foundation, and operational in 25 countries across the Asia Pacific region, the Youth Co: Lab initiative aims to create an enabling ecosystem to promote youth leadership, innovation, and social entrepreneurship.

### Context

- To recognize young people as critical drivers of sustainable development, Atal Innovation Mission (AIM), NITI Aayog and United Nations Development Programme (UNDP) India launched Youth Co: Lab which aims at accelerating social entrepreneurship and innovation in young India.

### Details

- Through Youth Co: Lab, young entrepreneurs and innovators will get a chance to connect with governments, mentors, incubators and investors, who will help equip them with entrepreneurial skills.
- Targeted at supporting young people overcome challenges, UNDP and AIM, NITI Aayog will empower young people through innovative development ideas.

- In this regard, Youth Co: Lab will convene social innovation challenges at the national and sub-national level, which will invite young people in the age group of 18-29 years and start-ups to showcase their proposed ideas and solutions to tackle some of the region's biggest social challenges.
- They will also get the opportunity to pitch their ideas at UNDP's regional centre in 2020.

## 18. RBI rate cut

### Context

- After the unconventional 35 basis points cut in interest rates in August 2019, the Reserve Bank of India (RBI) returned to a normal 25 basis points cut.

### Details

- Most analysts expected RBI to cut repo rate (the rate at which RBI lends to the banking system) anywhere between 35 to 40 basis points (a 100 basis points make up a single percentage point.) However, the RBI announced a cut of just 25 basis points.
  - \* The narrative in October picks the threads from August when the RBI spoke of the deteriorating demand situation. It had cut the repo rate by an unconventional 35 basis points then, and said this would help close the "negative output gap". But now it has acknowledged "the negative output gap has widened further".
  - \* A Negative Output Gap indicates surplus capacity in the economy. A widening of this gap means the industry is unable to use much of its capacity due to poor demand.
- The Monetary Policy Committee (MPC) cut the repo rate again based on the views of the MPC members on current and projected economic conditions.
- The MPC action was in line with the series of cuts by almost all major central banks across the globe, as counter-cyclical policy responses to the global slowdown.

### GDP Growth Projections

The central bank also lowered its growth forecast to 6.1 per cent, down from its previous estimate of 6.9 per cent, suggesting that the slowdown is more severe than was previously believed.

- High frequency indicators of economic activity remain weak, with a flat core infrastructure index growth, continuing weak automobile sales and a sharply lower services sector Purchasing Managers Index (PMI) showing a deep contraction
- Rural demand, proxied by sales of two-wheelers and tractors, contracted.
- Of greater concern is the fact that RBI's forward looking surveys show an expected drop in capacity utilisation of manufacturing firms in Q2 FY20. The Business Assessment Index also fell in Q2.

### Limitations on RBI

- The central bank has done the heavy lifting and monetary policy may well be nearing its limits in so far as its ability to influence growth prospects is concerned.
- Inflation is well within the target giving space to the RBI to focus on growth.
- Crude oil prices are back in the comfort zone, retreating from the spike in mid-September, and food prices are projected to remain soft on the back of a good monsoon.
- The monetary policy statement is unambiguous that the RBI will continue with its accommodative stance “as long as it is necessary to revive growth”.
- While this statement is credible, the problem is that the central bank can only facilitate lower rates and push banks to lend. It cannot force borrowers to borrow and this is evident from the soft trends in credit uptake in the last few months.

### Conclusion

- The onus, therefore, is on fiscal policy which alone can prod borrowing and investment.
- To be fair, the government has been engaging the levers, and the corporate tax cut last month is a major move to get private investment going.
- However, the ₹1.45 lakh crore giveaway has set off fears in the market of a fiscal slippage and higher borrowings by the government.
- Therefore government should pursue a more aggressive disinvestment programme to offset the expected shortfall in tax collections.

## **19. Creating jobs for young India**

### Background

- Unemployment has been at the center of public debates in India. The government’s Periodic Labor Force Survey carried out in 2017-18 revealed that unemployment in the country reached an all-time high rate of 6.1%.

### Stats

- Estimates based on official employment surveys and the Census show that in 2018, there were 471.5 million persons employed and 30.9 million unemployed in India.
- At the heart of the unemployment problem in India were young, unemployed men aged 15 to 29 years who comprised 21.1 million or 68.3% of all the unemployed in the country.

### Rising numbers of job seekers

- First, the size of labour supply in India is getting a boost from the rapid expansion of the working-age population in the country — the population of 15-59-year-olds increased at the rate of 14 million a year in the 2000s.

- Second, the nature of labour supply is changing too, with increasing enrolment of young adults for education and their rising job aspirations.
  - \* Of all 15-29-year-old females in India, 31% had been attending schools or colleges in 2018, up from 16.3% in 2005
- Third, the size of the workforce engaged in agriculture (and allied activities) has been declining in India: from 258.8 million in 2005 to 197.3 million in 2018 (which still accounted for 41.9% of the total workforce in the country).
  - \* This decline has been partly due to the ‘push’ from low-productivity agriculture, which has suffered due to stagnant public investment from the 1990s onwards.
  - \* The decline has also been driven by the ‘pull’ of new opportunities that emerge in the towns and cities.
  - \* A significant number of people who are ‘employed’ according to official statistics could actually have been in ‘disguised unemployment’ in agriculture (consider a person who does no job but occasionally assists his family in cultivation). Young persons in rural areas will be increasingly keen to exit disguised unemployment in agriculture.

### How have the sectors fared?

- Between 2005 and 2012, construction had been the major source of employment in India, absorbing men who exited agriculture in rural areas, especially in Uttar Pradesh, Rajasthan, Bihar and Madhya Pradesh.
  - \* New employment opportunities in construction created in rural India amounted to 18.9 million between 2005 and 2012, which fell sharply to 1.6 million between 2012 and 2018.
- The size of the manufacturing workforce in India declined by one million between 2012 and 2018, with micro and small firms in the informal sector suffering severe setbacks.
- At the same time, some segments of the services sector, especially education and professional, business and allied services recorded acceleration in employment growth after 2012.
- Even from 2005 to 2012, job creation in industry, construction and services in India (at the rate of 6.3 million a year) was inadequate to absorb the increase in potential job seekers into these sectors (at the rate of 14.2 million a year).

### What should the Govt do?

- As a result of the above-referred factors, there has been a significant increase in India in the supply of potential workers for the non-agricultural sectors. These are 15-59-year-olds who are not students nor engaged in agriculture. If provided the relevant skills, they could possibly work in industry, construction and services.

- To tackle this, action will be needed on multiple fronts including investments in human capital, revival of the productive sectors, and programmes to stimulate small entrepreneurship.
- Any long-term solution to the problem of unemployment to which the slowing growth of the economy is related must start with agricultural production.
  - \* Factors like land degradation involving loss of soil moisture and nutrients, and the drop in the water table, leading to scarcity which raises the cost of cultivation.
  - \* So we would need expertise of agricultural scientists to confirm what exactly is responsible for this state. Added to this intelligent governance, resource deployment and change in farmer behavior is a must to revamp the plaguing agricultural Sector.
- The unstable agricultural sector has not elicited an adequate economic policy response.
  - \* It is now time to draw in the public agricultural institutes and farmer bodies for their views on how to revive the sector.

### **Conclusion**

- If the country is unable to make effective use of the strengths of its young women and men now, it can perhaps never do so.
- Within the next two decades or so, India's population will gradually start getting older, and the demographic asset can become a demographic liability if suitable investment is not made in the Human resource.

## **20. Rethinking Water Management Issues**

### **Background**

- In December 2018, NITI Aayog released its 'Strategy for New India @75' which defined clear objectives for 2022-23, with an overview of 41 distinct areas.
- In this document, however, the strategy for 'water resources' is dull and unrealistic as the successive National Water Policies (NWP).

### **Effective strategic planning must satisfy three essential requirements.**

- One, acknowledge and analyse past failures;
- Two, suggest realistic and implementable goals;
- Three, stipulate who will do what, and within what time frame. The 'strategy' for water fails on all three counts.

### **No new vision**

The document reiterates some failed ideas:

- Adopting an Integrated River Basin Management approach
  - \* The integrated management concept has been around for 70 years, but not even one moderate size basin has been managed thus anywhere in the world.
- Setting up of River Basin Organisations (RBOs) for major basins.
  - \* And 32 years after the NWP of 1987 recommended RBOs, not a single one has been established for any major basin.
- The Water Resources Regulatory (WRA) authority is another failed idea.
  - \* Maharashtra established a WRA authority in 2005.
  - \* But far from an improvement in managing resources, water management in Maharashtra has gone from bad to worse.
  - \* Without analyzing why the WRA already established has failed, the recommendation to establish water resources regulatory authorities is inexcusable.
- The strategy document notes that there is a huge gap between irrigation potential created and utilised, and recommends that the Water Ministry draw up an action plan to complete Command Area Development (CAD) works to reduce the gap.
  - \* Again, a recommendation is made without analysing why CAD works remain incomplete, that too despite having a CAD authority as an integral component of the ministry.
- Goals in the document include providing adequate and safe piped water supply to all citizens and livestock; providing irrigation to all farms; providing water to industries; ensuring continuous and clean flow in the "Ganga and other rivers along with their tributaries", i.e. in all Indian rivers; assuring long-term sustainability of groundwater; safeguarding proper operation and maintenance of water infrastructure; utilising surface water resources to the full potential; improving on-farm water-use efficiency; and ensuring zero discharge of untreated effluents from industrial units.
  - \* These goals are not just over ambitious, but absurdly unrealistic, particularly for a five-year window.

### **Who is Accountable?**

- A strategy document must specify who will be responsible and accountable for achieving the specific goals, and in what time-frame.
  - \* Otherwise, no one will accept the responsibility to carry out various tasks, and nothing will get done.

- The Niti Aayog speaks about encouraging industries to utilize recycled/treated water.
  - \* But who will encourage them?
  - \* Should the State Water Ministries do this by restricting or even withholding recalcitrant industry's access to fresh water?
  - \* Should the Environment Ministries cancel clearances for industries which do not practise recycling?
  - \* Or should the Finance Ministries do this through monetary incentives and disincentives? No one knows.

#### **Many Challenges are unaddressed in the document**

- Of the issues listed under 'constraints', only one, the Easement Act, 1882, which grants groundwater ownership rights to landowners, and has resulted in uncontrolled extractions of groundwater, is actually a constraint. The remaining are not constraints.
- These are: irrigation potential created but not being used; poor efficiency of irrigation systems; indiscriminate use of water in agriculture; poor implementation and maintenance of projects; cropping patterns not aligned to agroclimatic zones; subsidised pricing of water; citizen's not getting piped water supply; and contamination of groundwater.
- These are problems, caused by 72 years of mis-governance in the water sector, and remain challenges for the future.
- Ideas listed under 'way forward' and 'suggested reforms' do not say how any of these will come about.
  - \* For example, there is no recommendation to amend the Easement Act, or to stop subsidised/free electricity to farmers. On the contrary, the strategy recommends promoting solar pumps. These are environmentally correct and ease the financial burden on electricity supply agencies.
  - \* However, the free electricity provided by solar units will further encourage unrestricted pumping of groundwater, and will further aggravate the problem of a steady decline of groundwater levels.

#### **Reforms Ignored**

- The document fails to identify real limitations.
  - \* For example, it notes that the Ken-Betwa River inter-linking project, the India-Nepal Pancheshwar project, and the Siang project in Northeast India need to be completed.
  - \* A major roadblock in completion of these projects is public interest litigations filed in the National Green Tribunal, the Supreme Court, or in various High Courts.
  - \* Unless the government has a plan to arrest the blatant misuse of PIL for environmental posturing, not only these but also other infrastructure projects will remain bogged down in court rooms.

- The document takes no cognizance of some real and effective reforms that were once put into motion but later got stalled, such as a National Water Framework law; significant amendments to the Inter-State River Water Disputes Act; and the Dam Safety Bill.

#### **Conclusion**

- India's water problems can be solved with existing knowledge, technology and available funds. But India's water establishment needs to admit that the strategy pursued so far has not worked and come up with innovative measures of problem solving by analyzing the past mistakes and adapting new strategies by taking examples from elsewhere and making due changes to suit the local conditions.

## **21. PRAKASH Portal**

#### **Context:**

- Union Ministers launch PRAKASH portal for transparency and better coordination in coal supplies to power plants.

#### **About the PRAKASH Portal:**

- PRAKASH is an acronym for 'Power Rail Koyla Availability through Supply Harmony'.
- The portal aims at bringing better coordination for coal supplies among all stakeholders, namely, the Ministry of Power, the Ministry of Coal, Coal India, Railways and power utilities.
  - \* The PRAKASH Portal is developed by NTPC (which is an electric power distribution PSU).
- This is an important step in ensuring adequate availability and optimum utilization of coal at thermal power plants.
- The portal is designed to help in mapping and monitoring the entire coal supply chain for power plant in:
  - \* Coal supply at stock end (mines)
  - \* Coal quantities/rakes planned
  - \* Coal quantity in transit
  - \* Coal availability at power generating station

#### **Benefits of the portal:**

- Coal companies will be able to track stocks and coal requirements at power stations for effective production planning.
- The Indian Railways will plan to place the rakes as per actual coal available at siding and stock available at power stations.
- Power stations can plan future schedules by knowing rakes in the pipeline and the expected time to reach stock at power generating station.
- Ministry of Power /Ministry of Coal/ CEA/ POSOCO can review overall availability of coal at thermal power plants in different regions.



## **22. It is still an amber light for road safety**

### **Introduction**

- The Motor Vehicles (Amendment) Act, 2019 has 63 clauses with the aim of reducing road traffic fatalities and injuries in India.
- The amended MVA has several new provisions: increased compensation for road accident victims, a Motor Vehicle Accident fund to provide compulsory insurance cover to all road users, defining a Good Samaritan, recall of a defective motor vehicle, development of a National Transportation Policy, a National Road Safety Board, recognising taxi aggregators and increased penalties for several offences.
- All these are intended to reduce traffic crashes by at least 50% by 2030 (a target set by the United Nations).
- Out of the many amendments, the increased penalties have been implemented in many States at the same time, many States have decided to “dilute” the suggested increase in penalties.

### **Can penalties act as deterrent?**

- New penalties have been introduced for ‘faulty registration details, the concessionaire or the contractor who is responsible for a faulty road design or has not followed standards, and for guardians of juvenile offenders to be penalised.
- While there have to be penalties for offenders, there does not seem to be any correlation between stricter and higher penalties and a reduction in road traffic crashes in countries where road traffic deaths have reduced over the years, examples being West Europe, the United States, Japan and Australia.
  - \* A report from New South Wales, Australia in 2007 evaluated the effectiveness of stricter penalties which said: “It is suggested that substantial increases in fines and licence disqualifications would have limited potential in deterring recidivist offenders”.
- The idea of higher fines as a deterrent to traffic crashes is based on the assumption that a driver is careless and that the fear of a higher penalty will encourage “careful” behaviour while on the road.

### **But this goes against current scientific understanding of Road Safety. How?**

- Studies have shown reducing traffic crashes can be done by promoting the design of a system which can forgive mistakes made by road users.
- Road safety experts suggest that road designs such as lane width, shoulder presence, number of lanes and median design influence driving behaviour such as operating speeds, lane changing, etc.
- Therefore, one could expect that ‘roads themselves play an important role in road safety, and improved geometry design and infrastructure could in turn help to improve road safety.

- Studies have also shown drivers are more likely to fall asleep or experience boredom on straight, monotonous, dual carriageway roads with little traffic. Stricter penalties and intensive driver training cannot reduce the risk of driver fatigue.

\* However, road engineers can change the road design to reduce boredom and monotony.

There is another factor in India.

- The density of small towns and villages along highways and the presence of tractors, three-wheelers, cars, buses, trucks and truck trailers on these highways present a very different traffic mix as compared to North America and Western Europe where most highway standards have been developed.
- Pedestrian and motorcyclist involvement in fatal crashes on highways is greater than those involving other road users.
- In the past two decades, there have been major investments in expanding the national highway system in India. Yet, fatalities have continued to grow.

### **Road safety data**

- It has been a tradition in ‘road safety to analyse road safety data in order to understand why crashes occur, which factors influence risks, and what determines crash severity, and then, based on this understanding, to arrive at reliable conclusions on how to prevent them most effectively and efficiently. This is called a Data-Driven Approach.
- In this approach, priorities are derived by using crash data, background data, exposure data and data on safety performance indicators. This is what researchers call as a scientific method and evidence-based interventions.
- India has still not created a culture of producing scientific evidence for designing preventive strategies.

### **Conclusion**

Given the understanding from traffic safety theories of the last 50 years, safety interventions have to be based on three important principles:

- Recognition of human frailty,
- Acceptance of human error,
- Creation of a forgiving environment and appropriate crash energy management.

Experience from the U.S. and European countries shows that road standards alone cannot ensure safe roads for all unless safety performance is evaluated. Therefore, if there is to be a reduction in India in the growing health burden due to traffic crashes, it requires establishing a system or institutional structure which enables the generation of new knowledge-new road standards thereby ensuring safe highways and urban roads. Thus, we have a long way to go in ensuring “safe road behaviour”.



## 23. Going down together: On IMF's slowdown warning

### Context

- The International Monetary Fund (IMF) has flagged a "more pronounced" slowdown in India as it called for a coordinated fiscal response to arrest the "synchronised slowdown in global growth".

### Details

- The IMF expects growth to slow down in nearly 90% of the world in 2019, in contrast to two years ago when nearly 75% of the world witnessed accelerated growth.
- In fact, global growth is expected to hit its lowest rate since the beginning of the current decade.

### Why Slowdown?

- Elements where slowing growth was blamed on various factors including the trade war between the United States and China, which is expected to shave off 0.8% from global GDP by 2020.
- India's economic growth is weaker because corporate and environmental regulatory uncertainty and "lingering weakness" in some non-bank financial companies.

### Recommendation

- IMF chief emphasized on the need for structural reforms to boost growth, particularly in the emerging market economies.

## 24. What can India do to overcome the global slowdown?

### Introduction

- The IMF expects global economic growth to be just 3% this year (2019), the lowest since the 2008 global financial crisis.
- Unlike in 2008, when India was insulated from a global economic meltdown, the economy now is on the ebb, with growth in the first quarter of 2019-20 hitting a six-year low of 5% and growth projections being slashed by agencies for the rest of FY20.

### Reasons for Slowdown

- The latest IMF World Economic Outlook says there is a synchronised global economic slowdown. The trigger was probably the trade slowdown.
- Recently, the WTO also indicated that world trade growth would be 1.2%, down from 3%.
- So, a very anaemic or even a flat growth rate in trade is pulling down the economy. And because this is the age of global integration, all economies get affected.
  - \* As the Indian economy has gradually opened up since 1991, the global economic situation has had spillovers in India.
  - \* Between 2003 and 2008, the Indian economy was averaging between 8% and 9% growth. After the collapse of Lehman Brothers, it came down to 6.2%, but we were very solid.

- \* There is always a spillover of global headwinds on the Indian economy.

- The trigger also lies in the protectionist tendencies of world economies and the U.S.-China trade war.
- India is also affected by this and other domestic issues.
  - \* The demand for capital goods is down, as is car sales.
  - \* Real estate is in trouble. The flow of credit to some of these sectors, which were an important determinant of sales, has been affected.
  - \* This has resulted in a spillover in the rest of the economy.

### What reforms can India pursue at this stage to align its manufacturing and trading activity with global demand patterns and protect itself from the world's growth pangs?

- There is a slump in demand. The Govt should look at fiscal stimulus as Public investment is very critical.
- Then there should be some kind of social spending which affects people in need with a high propensity to consume. Any cash reaching the poor will find its way into the market quickly.
  - \* The reduction of corporate tax will have only have a medium-term impact.
  - \* In the short term, we need to get the money in the hands of the poor which pushes them to the market so aggregate demand gets generated and, in the process, we also address the inequalities in recent times.
- India need's to tap the Asian markets. In that context, RCEP [Regional Comprehensive Economic Partnership] is an important initiative.
  - \* It gives us a possibility to integrate the Indian economy and production with the value chains in east-Asian countries.
  - \* Indian industry has grown with the comfort of having a large domestic market. We need to nudge industry to look at global and regional markets, especially for labour-intensive goods.
  - \* We need to avoid the appreciation of the rupee if we are to strengthen the domestic manufacturing industry. Any appreciation of the rupee facilitates more imports and less exports, adversely affecting domestic production.
- Going forward we need to increase domestic finance and improve governance mechanisms.

## 25. Asia's remarkable economic transformation

### Context

- This article draws a comparison of economic position of Asian countries before and after the colonial rule.
- It gives an idea of the economic model's adapted, transformation of the countries in terms of economic progress and living conditions of people in Asia.

### A look at key stats

- In 1820, Asia accounted for two-thirds of the world's population and more than a half of world income.
  - \* It also contributed more than a half of manufacturing production in the world economy.
  - \* The subsequent decline of Asia was attributable to its integration with the world economy shaped by colonialism and driven by imperialism.
- By 1962, its share in world income had plummeted to 15%, while its share in world manufacturing had dropped to 6%.
- Even in 1970, Asia was the poorest continent. Its demographic and social indicators of development, among the worst anywhere, signifying its underdevelopment.

### How Asia was able to transform itself?

In the half century since 1970, Asia has witnessed a profound makeover in terms of economic improvement and standard of living of its people.

- By 2016, it accounted for 30% of world income, 40% of world manufacturing, and over a third of world trade.
- Its income per capita also converged towards the world average, although the convergence was at best modest compared with industrialized countries because the initial income gap was enormous.
- This transformation was unequal across countries and between people. But, Asia's economic transformation in this short time span is unprecedented in history.

What led to this transformation of Asian Countries was the Self-regulating economic models that they were able to adapt after the colonial hangover.

- They had a well-established structure as it was not entirely destroyed by colonialism unlike the Latin American and African countries.
  - \* Governments which were able to evolve some institutional arrangements, carry forward carrot and stick policy suitably with institutionalized checks-and-balances, had evolved relationship between states and markets, development-orientation and people-friendly measures were able to bring massive changes in the economy.
  - \* Success at industrialization in Asia was driven by sensible industrial policy that was implemented by effective governments.
- The countries in Asia that modified, adapted and contextualized their reform agenda, while calibrating the sequence of, and the speed at which, economic reforms were introduced, did well.
- This ultimately led to
  - \* Economic growth leading to further development, GDP per capita in Asia were stunning and far higher than elsewhere in the world.

- \* Rising investment and savings rates combined with the spread of education were the underlying factors.
- \* Growth was driven by rapid industrialisation, often export-led.
- \* This was associated with structural changes in the composition of output and employment.
- \* The process was also supported by a coordination of economic policies across sectors and over time.

### Varying Political Ideologies and economic Models of Asian countries

The Asian countries has had its share of diversity

- There were marked differences between countries in geographical size, embedded histories, colonial legacies, nationalist movements, initial conditions, natural resource endowments, population size, income levels and political systems.
- The reliance on markets and degree of openness in economies varied greatly across countries and over time. The politics too ranged widely from authoritarian regimes or oligarchies to political democracies.
- So did ideologies, from communism to state capitalism to capitalism
  - \* There was no universal solutions to economic problems, countries chose different paths to development and this differed across space and time

### Regional variations and Unequal Income

However, development outcomes were unequal across sub-regions and countries.

- East Asia was the leader and South Asia was the laggard, with Southeast Asia in the middle, while progress in West Asia did not match its high-income levels.
  - \* In just 50 years, South Korea, Taiwan and Singapore joined the league of industrialised nations.
  - \* China was a star performer throughout, making impressive strides in development after 1990.
  - \* The economic dynamism of Indonesia, Malaysia, and Thailand waned after the Asian financial crisis.
- The growth performance of India, Bangladesh and Vietnam was most impressive during the past quarter century, although India and Bangladesh did not match the rest of Asia in social progress.
- In comparison, the performance of Sri Lanka was respectable, while that of Turkey was average; but that of Pakistan and the Philippines was relatively poor.

### Reduction in Poverty

- Rising per capita incomes transformed social indicators of development, as literacy rates and life expectancy rose everywhere.
- Rapid economic growth led to a massive reduction in absolute poverty. But the scale of absolute poverty that persists, despite unprecedented growth, is just as striking as the sharp reduction therein.
- The poverty reduction could have been much greater but for the rising inequality.
- Inequality between people within countries rose almost everywhere, while the gap between the richest and poorest countries in Asia remains awesome.

### Challenges ahead

- The rise of Asia represents the beginnings of a shift in the balance of economic power in the world and some erosion in the political hegemony of the West.
- The future will be shaped partly by how Asia exploits the opportunities and meets the challenges and partly by how the present difficult economic and political conjuncture in the world unfolds.
- In terms of per capita income, however, it will be nowhere near as rich as the United States or Europe. Thus, Asian countries would emerge as world powers, without the income levels of rich countries.

### Conclusion

- Openness facilitated industrialization in the past but in the future, technological learning and technological capabilities are also essential to provide the foundations for sustaining industrialization.
- By the end of 2050, a century after the end of colonial rule, Asia will account for more than a half of world income and will be home to more than half the people on earth. It will thus have an economic and political significance in the world

## **26. A tax policy that could work**

### A look at numbers revealing slowdown in the economy

- Private consumption has contracted and is at an 18-quarter low of 3.1%;
  - \* Weaker consumer demand and slowing private investments are the two key factors behind the ordeal of core Indian sectors.
- Rural consumption is in a deep southward dive and is double the rate of the urban slowdown;
- Credit off-take by micro and small industries remains stagnant;
- Net exports have shown little or no growth;
- GDP growth is at a six-year low with the first quarter of FY20 registering just 5%; and unemployment is at a 45-year-high.

\* According to the Centre for Monitoring Indian Economy (CMIE), overall unemployment in India has now touched 8.2 per cent, with urban figure as high as 9.4 per cent.

- Almost all Indian sectors including auto, manufacturing, agriculture, FMCG, real estate and construction have slumped badly, and official data released by the National Statistics Office (NSO) confirm that. All of these indicators also explain the reason behind the recent jump in job losses.

To overcome these issues of slowdown some measures like reducing the corporate tax rates were taken. But this could ultimately result in less tax collection for the Govt

- The Indian government should now be desperate to raise more tax revenues. It missed its tax targets massively in the last fiscal year, largely because of poor goods and services tax (GST) collections.
- Its declared budgetary target for the current year requires tax receipts to increase by around 25%, when the first quarter increase was only 6% over the previous year.
- In the misplaced belief that what is required to address the current slowdown is more tax relief to corporates, it has offered tax rate reductions to 25% of profits to companies that do not avail of other concessions, and further rebates to new companies.
- So very significant tax shortfalls are likely even in the current year, unless the government takes proactive measures.

### Looking at MNCs

But such measures need not — and should not — take the form of the tax terrorism by increasing GST rates, which would be regressive and counterproductive in the slowdown. Fortunately, there are other measures that could provide significantly more tax revenues to the government.

- One obvious low-hanging fruit is a strategy to ensure that multinational companies (MNCs) actually pay their fair share of taxes.
- It is well known that MNCs manage to avoid taxation in most countries, by shifting their declared costs and revenues through transfer pricing across subsidiaries, practices described as “Base Erosion and Profit Shifting” (BEPS).
  - \* Matters have got even worse with digital companies, some of the largest of which make billions of dollars in profits across the globe, but pay barely any taxes anywhere.
  - \* The International Monetary Fund has estimated that countries lose \$500 billion a year because of this.
  - \* Also, it creates an uneven playing field, since domestic companies have to pay taxes that MNCs can avoid.

### A new Idea of tax Collection

- The Organisation for Economic Co-operation and Development (OECD) has now recognised this through its BEPS Initiative, and has even attempted a belated attempt to include developing countries through what it calls its inclusive process.
  - \* So far, this process has delivered a few benefits, but these are limited because it has continued to operate on the basis of the arm's-length principle of treating the subsidiaries as separate entities.
- But this can change if there is political will. The basic idea is breathtakingly simple, and has been proposed by the Independent Commission for the Reform of International Corporate Taxation, or ICRICT
  - \* The idea is this: since an MNC actually functions as one entity, it should be treated that way for tax purposes. So the total global profits of a multinational should be calculated, and then apportioned across countries according to some formula based on sales, employment and users (for digital companies).
  - \* Obviously, a Minimum Corporate Tax should be internationally agreed upon for this to prevent companies shifting to low tax jurisdictions
  - \* Then, each country can simply impose taxes on the MNCs operating in their jurisdictions, in terms of their own shares based on the formula.

### Key concerns

- The biggest problem is the arbitrary separation between what OECD calls "routine" and "residual" profits, and the proposal that only residual profits will be subject to unitary taxation.
  - \* This has no economic justification, since profits are anyway net of various costs and interest.
  - \* The proposal does not clearly specify the criteria for determining routine profits, instead suggesting that the "arm's-length principle" will be used to decide this, which defeats the entire purpose.
- Another concern is about the formula to be used to distribute taxable profits.
  - \* The OECD suggests only sales revenues as the criterion, but developing countries would lose out from this because they are often the producers of commodities that are consumed in the advanced economies.

Instead, the G24 group of (some of the most influential) developing countries has proposed that a combination of sales/users and employment should be used, which makes much more sense.

### Conclusion

- It is important for the Indian government to look at this issue seriously and take a clear position at the OECD meeting, because the outcome will be very important for its own ability to raise tax revenues.

## **27. A road to economic revival runs through agriculture**

### Context:

- One of the world's fastest-growing economies, India, is now facing sluggish growth, with the Reserve Bank of India sharply cutting GDP growth forecast to 6.1% for 2019-20, which is lowest in the last six years.
- There has been a sharp decline in the performance of key sectors.

### Issues:

- While some economists feel this slow pace is also a stage to bounce back and is cyclical, others see this as a gross failure of economic reforms and even a colonial legacy.
- The ripples of the slowdown are gradually moving to the primary sectors which are already losing balance under an unprecedented confluence of pressure.
  - \* Real agricultural and allied gross value added (GVA) grew by 2.9% during 2011-12 to 2017-18, while in the National Agricultural Policy (2000), it should have been around 4%, to attain an overall economic growth of 8%.
- A highly skewed and unprecedented monsoon, erratic rainfall, and extreme natural events are creating havoc which in turn are likely to disrupt supply chains, fuel inflation and have a negative impact on consumption.
- All these factors could further dampen the prospects of revival of the economy.
- The current growth rate in the farm sector is less than adequate to take on developmental challenges originating from the Sustainable Development Goals, mainly zero hunger, no poverty, life on land, and gender equality. Hence any key reforms packages in improving the economy should also take cognisance of the crisis in the agricultural sector.
- The sweet spot created by low oil prices in the past is slowly taking its turn to hit the economy to further cut down aggregate demand.

### Addressing the slowdown:

- The key to addressing the slowdown lies in a selective group of reforms in the key sectors.
- The push must start with the primary sector.
- There is a great need to accept the role of agriculture in invigorating crucial economic segments.
  - \* The sector is a potential enabler and employer for more than 50% of the population;
  - \* It also has the potential to revive "animal spirits" by ensuring farm viability: increasing the ratio of farm to non-farm income to 70:30 by 2022-23 from the present 60:40.
  - \* According to the agriculture census 2015-16, the real income of farmers doubled in almost 20 years from 1993-94 to 2015-16.



- \* As the target to double farmers' income by 2022 is nearing, there must be fast-lane options and swift actions to ensure curated reforms on land, market, price, and ameliorate supply side constraints.
- \* The Agricultural Developmental Council (ADC) in line with the GST Council is a dire need to make agricultural reforms more expressive and representative.
- \* For better income distribution, there is also a need to revisit regional crop planning and the agro-climatic zone model at the highest possible level so as to make agriculture the engine of sustainable economic growth in India 2.0 by 2022
- There is immense need to promote occupations that are less influenced by the slowdown such as farming, handloom, handicrafts and others.
- Economic Survey 2018-19 states that the working-age population will continue to rise through 2041.
  - \* Therefore, there is an urgent need to increase the job-to-investment ratio which is currently very low.
  - \* Inter-State migration has a huge impact on personal consumption expenditure. Giving a policy nudge to in-situ employment creation is a must for a stable income and spending.
  - \* There must be efforts to have an accurate picture of unemployment data in order to have policy that is closer to facts.
- There is a need to reconsider the few distorting reforms that are often stated to revive the short-term chaos in the long run.

### **Conclusion:**

- Whatever the reason for the slowdown, the opportunity to speed up must accommodate a diverse body of opinion and options for sustainable and inclusive growth.
- The conventional approach of fiscal and monetary stimulus options to address the relics of a slow pace would only give immediate relief and not an enduring solution.
- Hence key policy measures as they exist now must reach out to emancipate that which is dragging growth while stimulating key sectors.
- The occasional dip in growth due to various reasons will slow the pace to achieving a \$5-trillion economy by 2024.
- This is the right time to execute a slew of doable agricultural reforms as the role of agriculture in reversing the slowdown is immense in the light of its nearly 20% contribution to a \$5-trillion economy.

- Therefore, a blend of efforts from a range of sectors, agriculture and allied sectors is warranted to enable overall growth.

## **28. Apprenticeship Pakhwada**

- It is a 15-day event aimed at driving widespread awareness of the Apprenticeship.
- During the Pakhwada period, the Ministry of Skill Development and Entrepreneurship (MSDE), will hold a number of workshops and seminars across major centres in the states with the aim of creating wider awareness about the Apprenticeship Training amongst establishments and employers across manufacturing and service sectors.
- The event witnessed collaboration with 22 organizations to provide apprenticeship training opportunities to more than 2.5 lakh youth in the country.
- This annual conference acts as a platform for the stakeholders of the various skilling schemes across the country, especially state government skill ministers to meet and discuss various issues affecting the skilling efforts in their states.
  - \* These will include all stakeholders including SSCs, industry partners, state governments, industry associations, third party aggregators and line ministry in various parts of the country.

### **Categories of apprentices**

There are four categories of apprentices namely

- Trade apprentice
  - \* To A person undergoing apprenticeship training in any designated trade. Designated trade is any trade / occupation / any subject field in engineering / non - engineering / technology / any vocational course as notified by the Government.
  - \* 8th, 10th, 12th standard and ITI pass - outs are eligible to undergo apprenticeship in designated trades for trade apprentices. In certain trades, B.Sc. pass is also a prescribed qualification.
- Graduate apprentice - A person who holds a degree in engineering /non - engineering and undergoing apprenticeship training in designated trade.
- Technician apprentice - A person who holds a diploma in engineering / non - engineering and undergoing apprenticeship training in designated trade.
- Technician (vocational) apprentice - A person who holds certificate in vocational course after the completion of the secondary stage of school education recognised by the All - India Council.



### Significance

- Apprenticeship has been recognized as an effective way to empower young people to smoothly shift from school & college to work whilst at the same time improving links between industry and training institutions.
- The National Apprenticeship Programme plays a large part in the task of up-skilling India's workforce, offering the opportunity to share costs among different parties (employers, individuals and the government) and to involve governments, employers and workers in partnership.
- Apprenticeship is a win-win situation both for industry and youth in coming together to help make the vision of 'Skilled India' a reality in future.

## **29. Authorized World Skills India Training Centers (AWSITC)**

### Context:

- The Union Minister of Skill Development and Entrepreneurship (MSDE), announced the launch of 14 Authorized World Skills India Training Centers (AWSITC) across 9 cities in India, for the Media and Entertainment sector.

### Details

- The new institutes are being set up for advanced skill training of candidates in the media and entertainment sector, not just to compete in the World Skills and India Skills competitions but also to further develop the skilling eco-system for training candidates for the international market.
- They are set up in partnership with the MESC (Media & Entertainment Skill Council).
- They will help the candidates to enhance their skills as per the global standards and the training programs will be designed as per the NSQF level (National Skills Qualifications Framework), which will be industry linked. All candidates will get hands-on training on live projects.
- Certification courses of 9 months to 36 months duration on graphic design technology, 3D Digital Game and Print Media technology will be offered at the centres.

## **30. DPIIT launches website and mobile app for IPR**

### Context:

- The Department for Promotion of Industry and Internal Trade (DPIIT) launched the website and mobile application 'Learn to Protect, Secure and Maximize Your Innovation' on Intellectual Property Rights (IPRs) in New Delhi.

### Details:

- The website and app have been developed by Cell for IPR Promotion and Management (CIPAM) – DPIIT in collaboration with Qualcomm and National Law University (NLU), Delhi.
- Both the website and the app are meant to be useful to the startup community, in the Intellectual Property (IP) process.
- There are two modules of this e-learning platform:
  - \* L2Pro India IP e-learning Platform
  - \* L2Pro India Mobile App
- These will aid and enable youth, innovators, entrepreneurs and small and medium industries (SMEs) in understanding IPRs for their ownership and protection, integrate IP into business models and obtain value for their R&D efforts.
- The L2Pro has been successfully implemented in Germany, the United Kingdom, Italy and France, benefiting immensely from close collaboration with respective IP organizations and public research institutions.
- The learning app has been customized for India.
- The L2Pro India IP e-learning platform will have 11 modules for three different levels:
  - \* Basic
  - \* Intermediate
  - \* Advanced
- Each module comprises of e-text for understanding concepts, short animated videos of the concepts, links to additional resources on the subject and quizzes for assessment and grading the learner's knowledge and understanding of the subject.
- Learners can access the L2Pro IP e-learning platform through their desktop, laptop, mobile browser and mobile application (available on Android & iOS).
- They will be provided e-certificates by CIPAM-DPIIT and NLU Delhi and Qualcomm on the successful completion of the e-learning modules.

## **31. India Innovation Index 2019**

### Context:

- NITI Aayog launches India Innovation Index 2019.

### Details

- NITI Aayog has released the India Innovation Index 2019 along with the Institute for Competitiveness as the knowledge partner.
- The study examines the innovation ecosystem of Indian states and union territories.

- The aim is to create a holistic tool which can be used by policymakers across the country to identify the challenges to be addressed and strengths to build on when designing the economic growth policies for their regions.
- The idea behind this index came from recognizing the role of innovation as a key driver of growth and prosperity for India.
- The study is an outcome of extensive research and analysis, which looks holistically at the innovation landscape of India by examining the innovation capabilities and performance of Indian states and union territories.

#### **Classification**

- The states have been classified into three categories: major states, north-east, and hill states, and union territories/city states/small states.
- The index attempts to create an extensive framework for the continual evaluation of the innovation environment of states and union territories in India and intends to perform the following three functions
  - \* Ranking of states and UTs based on their index scores
  - \* Recognizing opportunities and challenges
  - \* Assisting in tailoring governmental policies to foster innovation
- The index is calculated as the average of the scores of its two dimensions:
- Enablers: These are the factors that underpin innovative capacities, grouped in five pillars:
  - \* Human Capital
  - \* Investment
  - \* Knowledge Workers
  - \* Business Environment
  - \* Safety and Legal Environment
- Performers: This dimension captures benefits that a nation derives from the inputs, divided in two pillars:
  - \* Knowledge Output
  - \* Knowledge Diffusion

#### **Ranking**

- Karnataka is the most innovative major state in India. Karnataka's number one position in the overall ranking is partly attributed to its top rank in the Performance dimension. It is also among the top performers in Infrastructure, Knowledge Workers, Knowledge Output and Business Environment.
- Tamil Nadu, Maharashtra, Telangana, Haryana, Kerala, Uttar Pradesh, West Bengal, Gujarat, and Andhra Pradesh form the remaining top ten major states respectively.

- The top ten major states are majorly concentrated in Southern and Western India.
- Sikkim and Delhi take the top spots among the north-eastern & hill states, and union territories/city states/small states respectively.
- Delhi, Karnataka, Maharashtra, Tamil Nadu, Telangana, and Uttar Pradesh are the most efficient states in translating inputs into output.

#### **Steps to be taken**

- The broad level learnings and some policy imperatives at the national level include increasing the spending on research and development, improving the capability of top rung educational institutions in the country to produce greater innovation outputs.
- There is also a need for greater coordination and collaboration between the industry and educational institutions for enhancing innovation capability.

### **32. India Intellectual Property (IP) Guide**

#### **Context:**

The Services Export Promotion Council (SEPC), set up by the Ministry of Commerce & Industry, has brought out the India Intellectual Property (IP) Guide at Cannes in MIPCOM 2019 for the Media and Entertainment (M&E) industry.

#### **About the India Intellectual Property (IP) Guide:**

- The guide features a catalogue of over 60 Indian IPs, popular in over 160 countries.
- It tries to comprehensively break the narrative of only low-end work being done in India.

#### **About MIPCOM:**

- MIPCOM stands for Marché International des Programmes de Communication (French). In English, it can be translated as the International Market of Communications Programmes.
- It is a trade show held annually primarily geared towards the television/entertainment industry. It is held in Cannes, France.
- It is the world's largest exhibition of studios and distributors, and also the top showcase for content across all platforms and genres.
- Many important personalities from the global entertainment industry participate in the 4-day event.
- It also serves as a global premier for highly anticipated programmes.
- A spinoff event called the MIPJunior also takes place prior to MIPCOM, which is targeted towards the children's television industry.
- MIPCOM 2019 is being attended by some of the top renowned Indian media and entertainment companies.

- The India Pavilion is the one-stop place to meet content creators, audiovisual service providers in animation, VFX, AR/VR, gaming, new media services, film production services and much more.

#### **About the Services Export Promotion Council (SEPC):**

- SEPC is an Export Promotion Council set up by the Ministry of Commerce & Industry, Government of India, in 2006.
- It is an apex trade body which facilitates service exporters of India.
- As an advisory body, it actively contributes to the formulation of policies of the Government and acts as an interface between the Services Industry and the Government.
- SEPC has been instrumental in promoting the efforts of the Indian service exporting community, and in projecting India's image abroad as a reliable supplier of high-quality services.
- It organizes a large number of promotional activities such as Buyer-Seller Meets (BSM) – both in India and abroad, overseas trade fairs/exhibitions, and India pavilion/information booths in selected overseas exhibitions to demonstrate the capabilities of the Indian Services Industry.
- It currently has a membership base of over 3000 companies from 14 service sectors including accounting/auditing/bookkeeping, advertising, architectural, consultancy, distribution, educational, entertainment, environmental, healthcare, hotel and tourism, legal, maritime, market research/management, printing and publishing services..

### **33. 'Nirvik scheme may give fillip to export credit'**

#### **Context:**

- The Export Credit Guarantee Corporation of India (ECGC) is optimistic that the Nirvik scheme announced by the Union Government recently would give a fillip to export lending and insurance cover for export credit.

#### **Nirvik Scheme:**

- Nirvik scheme was introduced by Export Credit Guarantee Corporation of India (ECGC) to ease the lending process and enhance loan availability for exporters.
- Under the scheme, which is also called the Export Credit Insurance Scheme (ECIS), the insurance cover guaranteed will cover up to 90 percent of the principal and interest.

- The insurance cover will include both pre and post-shipment credit.
- The Export Credit Guarantee Corporation of India (ECGC) previously provided credit guarantee of up to 60 percent loss.

#### **Benefits of the scheme:**

- The insurance cover is expected to bring down the cost of credit due to capital relief, less provision requirement and liquidity due to quick settlement of claims and will ensure timely and adequate working capital to the export sector.
- It is expected to enhance accessibility and affordability of credit for exporters.
- It is believed to make Indian exports competitive and make ECGC procedures exporter friendly, benefiting MSME exporters with a new scheme for reimbursing taxes, reduced insurance cost and ease of doing business.

### **34. Odisha Integrated Irrigation Project for Climate Resilient Agriculture**

#### **Context:**

New World Bank Project to Support Climate Resilient Agriculture for 125,000 Smallholder Farmers in Odisha.

#### **Details:**

- The Government of India, the state Government of Odisha and the World Bank signed a US\$165 million loan agreement to support smallholder farmers in strengthening the resilience of their production systems as well as diversifying and improving the marketing of their produce, for increased income.
- This will be implemented in rural areas vulnerable to droughts and largely dependent on rain-fed agriculture.
- The project will strengthen the resilience of smallholder farmers against adverse climate by improving access to resilient seed varieties and production technologies, diversifying towards more climate-resilient crops, and improving access to better water management and irrigation services.
- The project will support the rehabilitation of 532 water tanks; promote productivity improvements at the farm level; support farmers to reduce the current emphasis on food grains (especially paddy and wheat) and increase the share of high-value and more nutritious products like fruits and vegetables; and provide marketing support to farmers who are able to generate a marketable surplus.

- The project will also support aquaculture in rehabilitated tanks, help farmers to access affordable and quality fingerlings, and disseminate improved aquaculture practices and post-harvest management.

### **35. Firm steps to ease the fiscal federalism tension**

#### **Context:**

- The GST though a welcome move has led to the decreased control over revenues for the states. The article deals with the need and means to enlarge the revenue base for the states keeping in view their responsibilities.

#### **Constitutional provisions:**

- The constitution envisages India as a Union of States. Citizens of every State elect their government independently. The primary responsibility of such an elected government is efficient governance and accountability to its voters. For this, the elected government is typically granted the powers to be able to raise revenues through taxation of its citizens and incur appropriate expenditure for their benefit.
- Article 246(1) of the Constitution of India states that Parliament has exclusive powers to make laws with respect to any of matters enumerated in List I in Seventh Schedule to Constitution (i.e; Union list).

#### **Recent Changes:**

- GST: Goods and Services Tax (GST) is an indirect tax on the supply of goods and services. It is a comprehensive multistage, destination-based tax. Though as a long term measure it is beneficial to the Indian economy, with GST States lost their sole powers to levy indirect taxes. Instead, they depend on a GST Council to determine tax rates and revenues.
- The amendment to the terms of reference (TOR) issued to the Fifteenth Finance Commission asking it to examine the viability of a separate mechanism for funding of defence and internal security. The Centre has proposed that there should be a permanent expenditure fund created for defence spending out of the total tax revenue pool. This will likely reduce the tax revenues distributed to States for their own expenditure.

- The Economic Advisory Council to the Prime Minister (EAC-PM) has recommended a GST Council-like mechanism for the Centre and states to oversee public expenditure. Though the stated aim is fiscal consolidation the move is likely to limit the discretionary powers of the states with regard to their expenditure.

#### **Need for Relooking at Fiscal Federalism:**

- Fiscal Imbalance: The constitutional fiscal arrangement shows that vertical fiscal imbalances (between the state and Centre) are deemed inevitable as most of the powers of taxation are given to the Central government. The differences in the endowment position of natural resources across States cause horizontal federal fiscal imbalance.
- Present scenario: More than 80% of the government's revenues come from taxes, primarily from income tax and sales taxes. State governments in India do not have powers to levy income taxes. This affects the states resource base.
- Mandate for the state Governments: Given the huge mandate for public work there is a need to ensure more resources for the states. Major State responsibilities include schools, hospitals, conservation and environment, roads, railways and public transport, public works, agriculture and Industrial infrastructure. The developmental demands on state governments are rising.
- Successful Examples: Successful State schemes have shown the viability of empowering state resources and providing them more autonomy. E.g. TN Midday meal scheme.

#### **Positive steps taken by the Centre:**

- Finance commission's recommendation and the subsequent acceptance by the Centre to devolve 42% of the divisible funds to states up from 32% previously has taken the total transfers up from the previous 39.5% to 47%.
- The present 15th Finance Commission is also looking at increasing this further.
- Rationalizing the Centrally sponsored schemes will reduce the burden on the states' exchequer.

**Way forward:**

- The huge economic and cultural diversity among the various States mandates the need for further strengthening Fiscal federalism. It is imperative that democratically elected State governments are given powers to raise revenues and incur expenditure in accordance with each State's needs and priorities.
- Need to address the fiscal federalism tension between the Centre and States which if not can erupt into divisive and separatist tendencies.
- The one tangible solution to restore this balance is to grant State governments the power to levy income taxes. In large federal democracies such as the United States, State governments and even local governments have the right to levy income taxes. India can explore this option. The proposed direct tax code provides an opportunity.



# INTERNATIONAL RELATIONS

## 1. China's growing clout at the UN

### Introduction

- India had fielded Ramesh Chand for top post of Director-General of the Food and Agriculture Organisation (FAO)
  - \* But it withdrew its candidate sensing the defeat by China's Qu Dongyu
- Eventually China's Qu Dongyu was elected as the Director-General of FAO
  - \* His election shows China's growing influence that gains it leadership positions in world organisations.
  - \* China with its renminbi diplomacy of investing in development projects around the world, especially in developing countries, was able to out manoeuvre France and also the US, which backed Georgia's candidate.
- In the first week of October 2019, when President Xi Jinping led China's biggest-ever military parade to mark the 70th anniversary of Communist rule, for the first time a contingent from the country's 8,000-strong UN peacekeeping standby force participated.

### Filling the vacuum

- Whether through specialised UN agencies or peacekeeping, China is racing to fill the vacuum in international leadership left by the withdrawal of the U.S. from multilateral fora under President Donald Trump, and taking advantage of the lack of convergence among the permanent members of the Security Council on many global issues.
- Unlike India whose UN outreach is largely limited to a customary reiteration of its decades-old advocacy for the expansion of the Security Council, China is aggressively seeking more positions in the UN Secretariat hierarchy.
  - \* It also aims to play a bigger role in peacekeeping operations.
- For much of the Cold War era and beyond, China's role at the UN was largely that of a disruptor aimed at thwarting attempts by Western democracies to impose a liberal vision on the world.
  - \* But today Beijing is trying to reverse that role and is actively seeking to use the UN platform to legitimise — and spread — its ideology.
- China has increased its monetary contributions to the UN fivefold in the past decade. President Xi is keen to project his country as a "champion of multilateralism," even as Mr. Trump is busy disbanding multilateral agreements and engaging in trade wars

- With increased financial contributions and concomitant clout, China has been able to get Communist Party officials to head more than a quarter of UN's specialised agencies including the FAO, the Industrial Development Organization, the International Civil Aviation Administration and the International Telecommunication Union.

### View on human rights

With its increasing influence at the UN, China is eager to push its ideological stance through the global body.

- It argues that each country may choose its own human rights protection in the context of "national circumstances".
- Ironically, through the body tasked with bringing human rights violators to account — the Human Rights Council, which the U.S. abandoned — China is diluting the concept of universal values and promoting its world view on the subject.
- "In 2017, Human Rights Watch exposed Beijing's efforts to silence UN human rights experts and staff, to prevent critical voices from China from participating in UN processes, and to manipulate rules and procedures to ensure more favourable reviews," the human rights group said in a report.
- For some time now, there is speculation of a coordinated Sino-Russian front at the UN.
  - \* The two countries seem to frequently align their positions, especially when human rights issues come up.

### Conclusion

- With no one to stand up to China in the absence of U.S. leadership at the UN, Beijing is actively promoting its foreign policy initiatives, especially the Belt and Road Initiative, through the global body.
- The prevailing lack of strategic unity among the Western members of the Security Council is ripe for the duo to advance their interests, and China seems keen to take advantage of the opportunities this disarray presents to enhance its hold on the UN.

## 2. Ekuverin

- The Indian Army and the Maldives National Defence Forces have been conducting Exercise Ekuverin meaning 'Friends' in Dhivehi (Maldivian language) since 2009.
- The 14-day joint exercise is held alternatively in India and the Maldives.
- The exercise focuses on enhancing interoperability between the two forces for carrying out counter-insurgency and counter-terrorism operations in a semi-urban environment under the United Nations mandate.

- The focus of the exercise will be on sharing best practices and acquainting each other with the operating procedures being followed while undertaking counter-insurgency and counter-terrorism operations.

#### **Context:**

- The 10th edition of the joint military exercise Ekuverin between the Indian Army and the Maldives National Defence Force was organised at Aundh Military Station in Pune, Maharashtra.

### **3. Future Investment Initiative Forum**

- The forum is an international investment forum annually held in Riyadh, Saudi Arabia.
- It brings together decision makers, leading investors and global experts to explore future economic trends and opportunities, shed light on the future of industries, and discuss how investment can continue to drive overall global prosperity and development.
- The forum will understand the emerging trends in the world and find avenues for the world's welfare in it.
- It is hosted by the Public Investment Fund of Saudi Arabia (PIF).
  - \* The PIF was founded for the purpose of investing funds on behalf of the Government of Saudi Arabia.
  - \* It is one of the largest sovereign wealth funds in the world with total estimated assets of \$320 billion.
- The Future Investment Initiative Forum was first held in 2017.

#### **Context:**

- Prime Minister gives keynote address at the Future Investment Initiative Forum in Riyadh.

### **4. India Bangladesh Relations**

#### **Context**

- Bangladesh Prime Minister Sheikh Hasina's paid a four-day visit to India.

#### **Background**

- The two nations have come closer over a decade-long engagement that began with Ms. Hasina's return to power in 2008, with an improvement in the strategic sphere, and alignment on regional and global issues, connectivity and trade.
- The Bangladesh government has uprooted security threats and acts of insurgency against India
- The signing of the Land Boundary Agreement in 2015 was a milestone, where the two neighbours amicably resolved a long-outstanding issue.

#### **India and Bangladesh signed seven agreements in areas of**

1. Standard Operating Procedure (SOP) on the use of Chattogram and Mongla ports
  - \* It will serve the north-east states which testifies the goodwill between the two countries.
2. Memorandum of Understanding (MoU) withdrawal of 1.82 cusec of water from Feni river by India for drinking water supply in Tripura,
3. Agreement concerning implementation of GoI Line of Credits (LOC) extended to Bangladesh,
4. MoU between University of Hyderabad and University of Dhaka,
5. cultural exchange programme,
6. MoU on co-operation in Youth Affairs,
7. MoU on providing coastal surveillance system.
  - \* They will also coordinate better border management and counter-terror cooperation

#### **The Leaders inaugurated three bilateral development partnership projects**

- 1) Import of Bulk LPG from Bangladesh
  - \* It allows India to buy liquefied petroleum gas from Bangladesh for consumption in India's northeastern state of Tripura.
  - \* The LPG will be transported by Bangladeshi trucks to the Indian state cutting down transport times and costs.
2. Inauguration of Vivekananda Bhaban (student's hostel) at Ramakrishna Mission, Dhaka
3. Inauguration of Bangladesh-India Professional Skill Development Institute (BIPSDI) at the Institution of Diploma Engineers Bangladesh (IDEB), Khulna
  - \* It will provide basic as well as advanced training some 200-300 Bangladeshi youth on an annual basis for employment in the small and medium scale industry sectors.

#### **Boost to the relationship**

- After Hasina's visit, the two countries will increase flights from 61 to 91 per week in summer, and to 120 per week in winter.
- The frequency of the Maitree Express will go up from 4 times to 5 per week, and that of Bandhan Express from once to twice per week.
- Both sides welcomed plans for a Dhaka-Siliguri bus; there are services between Kolkata and Dhaka and Agartala and Dhaka already.

#### **Unresolved issues**

- The Teesta agreement, for which a framework agreement was inked in 2011, but which has not moved forward since, chiefly because of tensions between the Central and West Bengal governments.

- \* A lack of water has affected 100,000 hectares of land in Bangladesh, with contamination affecting the soil; the increased cost of pesticides and irrigation has made farming less profitable.

- The long-pending upgrading of the Ganga-Padma barrage project, the draft framework of interim sharing agreements for six rivers — Manu, Muhuri, Khowai, Gumti, Dharla and Dudhkumar — as well as the draft framework of interim sharing agreement of the Feni river are also pending.
- This task must not be taken lightly between two countries that share 54 transboundary rivers, and where water management is key to prosperity, and often a source of tensions and humanitarian disasters.
- The National Register of Citizens (NRC) has left out 1.9 million Assamese from the list with a group labelled as “illegal immigrants from Bangladesh” living in Assam post-1971. Bangladesh remains firm in its stance that no migrants travelled to Assam illegally during the 1971 war of independence and that the controversial NRC risks hurting relations.
- Prime Minister Modi has assured Prime Minister Hasina that the NRC will have no implications for Bangladesh, this commitment needs continuous reiteration

#### **Conclusion**

- India now hopes that as Bangladesh's economy improves more people come out of poverty and the illegal migrations into India would automatically stop.
- For Bangladesh, staying on the path to sustainable development involves fostering a strong partnership with neighbouring India. In that regard, Prime Minister Sheikh Hasina has been tireless in her efforts, and her current visit to India is an example of the sort of diplomacy required to ensure Bangladesh's position in the world
- India-Bangladesh relations have matured in the last decade with development in many areas of cooperation. In a neighbourhood where distrust and cynicism prevail over friendship and hope, the relationship between the two countries has given hope for optimism. But the sooner existing challenges are resolved, the better it is.

#### **5. Indian Council of World Affairs (ICWA)**

- ICWA was established in 1943 by a group of Indian intellectuals as a think tank.
- By an Act of Parliament in 2001, the ICWA was declared an institution of national importance.
- The Vice President of India is the ex-officio President of ICWA.
  - \* Minister of External Affairs is its Vice-President.
- It is devoted exclusively for the study of international relations and foreign affairs.
- The founder-president of the Council was Sir Tej Bahadur Sapru.

- Historic international conferences like ‘Asian Relations Conference’ in 1947 under the leadership of freedom fighter Sarojini Naidu and ‘United Nations and the New World Order’ in 1994 have been held by this think tank in which world-renowned dignitaries addressed huge gatherings of intellectuals.

#### **Context**

- The Vice President Mr. Venkaiah Naidu addressed the 18th meeting of the Governing Body of Indian Council of World Affairs (ICWA) at New Delhi.

#### **6. Indo-Chinese educational tie-ups need nod from Home, foreign Ministries**

#### **Context**

- University Grants Commission has issued new guidelines to educational institutions that wish to sign agreements with the Chinese counterparts.

#### **Details:**

- The guidelines make it mandatory for educational institutions that plan to collaborate with Chinese counterparts to get clearance from the Ministries of Home and External Affairs before signing any agreements or undertaking student and faculty exchange programmes.
- The new guidelines would also apply to existing tie-ups.
  - \* The UGC letter added that those universities including private universities that have already entered into MoUs must seek clearance from the Home ministry for operating the MoU. Until the clearance is obtained, no further activities should be performed under the MoU, the letter warned.
- A number of Indian universities already have faculty and student exchange programmes, apart from Chinese language centres run in collaboration with universities in China.

#### **India-China Co-operation in the field of education:**

- India and China signed an umbrella agreement for educational cooperation in 2006, under which government scholarships are awarded to 25 students, by both sides, in recognised institutions of higher learning in each other's country.
- During Prime Minister Narendra Modi's visit to Beijing in May 2015, both countries signed an expanded Education Exchange Programme agreement which provides for enhanced cooperation in the field of vocational education and higher learning.
- Chinese students were also granted scholarships to study Hindi in India.

#### **7. Indus Water Treaty**

- The Indus Waters Treaty is a water-sharing arrangement signed by then Indian Prime Minister Jawaharlal Nehru and then Pakistan president of Pakistan Ayub Khan on September 19, 1960, in Karachi.

- It covers the water distribution and sharing rights of six rivers - Beas, Ravi, Sutlej, Indus, Chenab and Jhelum.
- The agreement was brokered by the World Bank.



Indus Waters Treaty: Indus, Ravi, Beas, Chenab, Jhelum and Sutlej

#### Why was the agreement signed?

- The agreement was signed because the source of all the rivers of the Indus basin were in India (Indus and Sutlej, though, originate in China).
- It allowed India to use them for irrigation, transport and power generation, while laying down precise do's and don'ts for India on building projects along the way.
- Pakistan feared that India could potentially create droughts in case of a war between the two countries.
- A Permanent Indus Commission set up in this connection

#### Permanent Indus Commission (PIC)

- The treaty also established the Permanent Indus Commission, made up of one Commissioner of Indus Waters from each country.
- The two Commissioners would meet annually in order to establish and promote cooperative arrangements for the treaty implementation; promote cooperation between the Parties in the development of the waters of the Indus system; examine and resolve by agreement any question that may arise between the Parties concerning interpretation or implementation of the Treaty; submit an annual report to the two governments
- In case of a dispute, provisions were made to appoint a "neutral expert." If the neutral expert fails to resolve the dispute, negotiators can be appointed by each side to meet with one or more mutually agreed upon mediators.
  - \* If either side (or the mediator) views mediated agreement as unlikely, provisions are included for the convening of a Court of Arbitration.
  - \* In addition, the treaty calls for either party, if it undertakes any engineering works on any of the tributaries, to notify the other of its plans and to provide any data which may be requested

#### What does the agreement entail?

- The treaty gave the three "eastern rivers" of Beas, Ravi and Sutlej to India for use of water without restriction.
- The three "western rivers" of Indus, Chenab and Jhelum were allocated to Pakistan.
- India can construct storage facilities on "western rivers" of up to 3.6 million acre feet, which it has not done so far.
- India is also allowed agriculture use of 7 lakh acres above the irrigated cropped area as on April 1, 1960.

#### Why is the Indus Waters treaty important for Pakistan?

- Indus, Chenab and Jhelum are the lifelines of Pakistan as the country is highly dependent on these rivers for its water supply.
- Since these rivers do not originate from Pakistan but flow to the country through India, Pakistan fears the threat of drought and famine.

#### Context

- Prime Minister Narendra Modi has said India would put to use its share of water from the rivers flowing to Pakistan and ensure that every single drop was used for the country's farmers.

### **8. India- Mexico Relationship (Towards a strategic partnership)**

#### Introduction

- Mexico was the first Latin American country to recognize India after independence. They have had 69 years of diplomatic relations based on mutual interest and understanding.
- Mexico and India have enjoyed a Privileged Partnership since 2007.
  - \* This allowed the growth of bilateral relations in economic field, in science and technology and in the most important issues of the global agenda reflecting a broad convergence of long-term political, economic and strategic goals.
- Prime Minister Narendra Modi and President Nieto in the past have also agreed to work for achieving a 'Strategic Partnership'.

#### Economic Relationship

- Mexico has become India's top trading partner in Latin America and it is the top investor from the region in India, while India is now for the first time among Mexico's top 10 commercial partners.
  - \* More than 13 Mexican companies have presence in India and more than 100 Indian companies have presence in Mexico
- India's exports mainly include vehicles and auto parts, organic chemicals, electrical machinery & electronic equipment, aluminium products, readymade garments, iron and steel products and gems & jewellery.



- India's imports mainly consisted of crude oil, electrical goods and machinery, organic chemicals, vehicles and auto parts and iron & steel. India is the third largest buyer of Mexico's crude oil.
- The bilateral trade reached more than \$10 billion in 2018, four times what it was in 2009.

### **Tourism Sector**

Tourism is one of the major sector which brings people together. They take pride in their ancient and rich Civilizations

- In 2018, Mexico attracted 41 million international tourists, 6% more than 2018.
  - \* According to the WTO, Mexico is the sixth most-visited country in the world, and it is proud home to 35 UNESCO World Heritage Sites, a figure comparable to India's.
  - \* In the year 2018 Indians have been among the top 20 visitors to Mexico, and Indian tourism to Mexico is exceeding that of many European countries.
- Mexico has a great variety of attractions like beaches, colonial cities, natural scenery, cultural diversity and ancient history.
- This has also been made possible by the wide variety of flights and airlines connecting both countries.
- More connectivity to facilitate leisure travel would enhance trade and business cooperation between the two countries.

### **Challenges**

- The bilateral relationship has long been characterized by warmth, friendship and commonality of views on a wide range of issues, even though there are differences on expansion of the permanent membership of the UNSC, environment and nonproliferation.
- Mexico is member of group, which opposes any expansion of permanent seats.
  - \* Uniting for Consensus (UfC) is also nicknamed the Coffee Club
  - \* Italy along with Pakistan, Mexico and Egypt, in 1995 founded the "Coffee Club".

### **Way Forward**

Mexico and India have a common goal: social development and inclusion.

- To accomplish this, both the countries should be determined to promote trade and investment in priority sectors; improve market access, including agricultural products; promote tourism; and foster cooperation in many areas, such as energy, science and technology.

- Our collaboration is also important to strengthen multilateralism and the rules-based international system, and to foster cooperation within mechanisms such as the G20.

## **9. IMNEX**

- It is India Myanmar Naval Exercise
- It will encompass numerous operations including anti-air and surface firing exercises and flying exercises using integral helicopter and seamanship evolutions at sea.

### **Significance**

- India and Myanmar have been continuing to strengthen their defense ties
- The exercise would be aimed at strengthening professional interaction and also attain interoperability between the two navies.

### **Context**

- The second edition of the India Myanmar Naval Exercise 'IMNEX-19' was conducted at Visakhapatnam.

## **10. KAZIND**

### **Context**

- The 4th edition of the annual military exercise KAZIND between the armies of India and Kazakhstan commenced at Pithoragarh in Uttarakhand.
- The current edition is a 13-day exercise with about 100 soldiers from both sides participating in the event.

### **About KAZIND:**

- The aim of this exercise is joint training of troops in counter-insurgency/counter-terrorism operations in both jungle and mountainous terrains.
- As part of the exercise, lectures, demonstrations and drills related to counter-insurgency and counter-terrorism operations will be conducted.
- Both the armies will also share their valuable experiences in countering such situations and also refine drills and procedures for joint operations whenever the need so arises.
- KAZIND is conducted every year with the venue being India and Kazakhstan alternatively.

## **11. Minsk Dialogue**

- It was launched as a Track-1.5 initiative at the beginning of 2015.
- Its mission is to offer an open and geopolitically unbiased platform for research and discussion on international affairs and security in Eastern Europe.
- The Minsk Dialogue Forum provides a unique platform where relevant stakeholders can engage in such discussions and seek, at the very least, to agree on minimum standards of security for all.



## 12. Nepal-China cooperation

### Context

- As Xi Jinping flew from Chennai to Kathmandu, he became the first Chinese President to visit Nepal in 23 years.
- He rounded up the trip by signing as many as 20 agreements with Nepalese Prime Minister KP Sharma Oli, including the building of a road tunnel and a feasibility study of a railway link to Tibet.

### What should India look at?

- President Xi Jinping's brief but significant visit to Kathmandu was defined by the determination to accelerate the development of an ambitious Trans-Himalayan Corridor between China's Tibet and Nepal.
- While Delhi will debate the issues generated by China Nepal Economic Corridor for some time to come, it also needs to pay attention to an equally important dimension of China-Nepal relationship — the deepening of bilateral security cooperation.

The point to be noted is that, there is lot of difference between Defence Diplomacy and Security Diplomacy.

### Defence Diplomacy

- Militaries are traditionally associated with conflict and use of force whereas Diplomacy is defined as the art of conducting relationships for gain without conflict. In a lighter vein, military diplomacy like military intelligence may be construed to be an oxymoron.
- In the 18th and 19th centuries the coercive use of militaries (and navies) by colonial powers led to coining of the term 'Gunboat Diplomacy' which refers to the pursuit of foreign policy objectives with the aid of conspicuous displays of military power, implying or constituting a direct threat of warfare.
- As a corollary, there have been numerous instances of peaceful use of military to further a nation's international relations. This peaceful use of the military as a tool of national diplomacy led to the use of the term 'Military Diplomacy'.
  - \* Thus 'military diplomacy' could be defined as use of (peaceful) military in diplomacy, as a tool of national foreign policy.
- The Indian Ministry of Defence defines Defence Diplomacy as exchange of high level defence related visits, dialogue on security challenges and port calls; and defence cooperation as those activities covered by training exchanges, combined exercises; sourcing, development, production and marketing of defence equipment and other forms of cooperation

### Security Diplomacy

- This includes exchange of information between police forces, intelligence agencies, border management organisations and law-enforcement authorities of the two nations.

- Security diplomacy has emerged as a major element of China's international relations in all geographies.
- The globalisation and digitalisation of the Chinese economy, the growing movement of people across Chinese borders and expanding capital and human assets beyond borders have made law enforcement cooperation with the rest of the world a major priority for China.
- The range of issues involved in security diplomacy include tracking down fugitives from Beijing's anti-corruption campaign, criminals seeking safe haven in other countries, countering terrorism, preventing drug trafficking, assisting Chinese citizens and tourists abroad, and reining in political dissidents active in other countries.
- The importance China attaches to security diplomacy is reflected in the fact that four of the 20 documents signed in Kathmandu relate to law enforcement.
  - \* These agreements touched on border management, supply of border security equipment, mutual legal assistance, and collaboration between Nepal's Attorney General and China's "Supreme People's Procurator" (or the prosecutor general).

### Why Security Diplomacy matters for China?

- Nepal's northern border with China is entirely with Tibet, and Beijing sees security cooperation with Kathmandu as critical in controlling the movement of people across this frontier.
  - \* Nepal, which was once hospitable to Tibetan refugees fleeing China, now extends full support to Beijing's law enforcement agencies in tracking and deporting them. Nepal's security cooperation has become intense ever since trouble broke out in Tibet in the early years of this century
  - \* Growing bonhomie between China and Nepal's political leaders has provided a more permissive environment for this cooperation on Tibet.
  - \* In recent years, Chinese security agencies have apparently gained effective access to border areas on the Nepali side in dealing with Tibetan exiles

### How has this helped Nepal?

- As the joint statement issued after Xi's talks in Kathmandu put it, the two sides agreed to "respect and accommodate each other's concerns and core interests".
- Nepal "reiterated its firm commitment to One-China policy" and acknowledged that Tibetan matters "are China's internal affairs".
  - \* Kathmandu also promised not to allow "any anti-China activities on its soil".

- \* The statement also signalled satisfaction at the signing of the "Treaty on Mutual Legal Assistance in Criminal Matters and expressed hope for an early conclusion of the Treaty on Extradition."
- China, in turn, declared, its firm support to Nepal in upholding the country's independence, sovereignty and territorial integrity, and its firm support and respect to Nepal's social system and development path, independently chosen in the light of Nepal's national conditions.
- \* China, in turn, has promised to enhance the capacities of Nepal's law enforcement agencies.

### **Conclusion**

- Massive modernisation of its internal administrative structures, significant investments in new technologies, and an effective integration of law enforcement into China's foreign policy have transformed China's pursuit of security diplomacy.
- It is by no means limited to neighbours and is now spread across all geographies — from developed countries in North America and Europe to the developing world in Asia and Africa.
- China is also participating in the development of new international rules on law enforcement, shaping the discourse on issues at hand, and seeking leadership positions in multilateral organisations dealing with law enforcement.
- Like the other great powers that preceded it, China sees security diplomacy and law enforcement cooperation as important tools of statecraft.

### **13. Nitaqat law- Indians stranded in Saudi seek help**

- Nitaqat is a Saudization program introduced by the Saudi Ministry of Labour.
- Enacted in 2011, the Nitaqat law makes it mandatory for all businesses in the private sector to reserve at least 10 percent of jobs for Saudi nationals.
  - \* The Nitaqat law makes it mandatory for local companies to hire one Saudi national for every 10 migrant workers.
- Based on their level of compliance, establishments are categorized into Blue, Green, Yellow and Red groups
  - \* Blue and Green businesses having the highest localization ratios,
  - \* Yellow falling in the intermediate range
  - \* Red the least compliant.
- Therefore, the 'Nitaqat' law aims to gradually replace the existing expatriate workers with Saudi workers by processes involving quotas and threats of punishment and also, tackles the issue of rising unemployment among Saudi nationals.

### **Context**

- Around 600 employees have been languishing in labour camps in Dammam without food, medicine, or wages.
- These workers, many of them working in Saudi Arabia for 5 to 30 years, were left in dire straits as their companies, mostly in the construction sector, were listed in the 'Red' category after they failed to implement the Nitaqat.

### **Details**

- The employees had submitted a written complaint to Saudi Labour Court with the support of the Indian Embassy help desk and the verdict was in favour of them.
- But the company was not taking any step to execute the judgement
- Therefore the Union government should take up the issue in the diplomatic-level with the Saudi Ministry to take urgent steps to bring these workers home

### **14. Nomadic Elephant**

#### **Context:**

- The 14th edition of the Indo – Mongolian joint military training, Exercise Nomadic Elephant-XIV, was conducted at Bakloh, Himachal Pradesh.

#### **Details**

- The bilateral exercise is aimed at training troops in counter-insurgency and counter-terrorism operations under the United Nations mandate.
- The joint exercise will enhance defence cooperation and military relations between the two nations.
- It is an ideal platform for the armies of both countries to share their experiences and best practices and gain mutually during the joint training.
- The joint training aims at evolving various tactical drills in counter-terror environment like convoy protection drill, room intervention drills, ambush/ counter-ambush drills, while jointly conducting counter-terrorist operations under the UN mandate.
- The joint training will also lay emphasis on conducting operations by a cohesive subunit, comprising of troops from both the armies, in an adverse operational conditions thus enhancing the interoperability between the two armies.
- The exercise is an annual event being held since 2006.

### **15. Power of Siberia**

- The Power of Siberia project is a unified Gas Transmission System (GTS) involving the development of a 4,000km-long gas pipeline to transfer natural gas from Yakutia and Irkutsk gas production centres in Eastern Russia to the Far East and China.

- The project is being developed by Russia's state-owned Gazprom
- Under the Power of Siberia deal, Russia will begin supplying 5 billion cubic metres (bcm) of gas to China next year.

#### Significance

- The new channel will become a powerful symbol of the personal friendship between Chinese President Xi Jinping and his Russian counterpart Vladimir Putin.
- China is moving from coal to gas with an aim of providing clear air to its citizenry, thereby adding less to the global carbon stockpile

#### **Amur River (Russian)**

- Its Chinese name is Heilung Jiang which translates to Black Dragon River.
- The Amur River is located on the border of China and Russia and is a major waterway in the northeastern part of Asia.
- It is the world's tenth longest river

#### Context

- There is construction of more than one kilometer long bridge which connects the Russian city of Blagoveshchensk, and Heihe, a key border city in northeast China's Heilongjiang Province.
- It is the first bridge linking the two countries.



#### Context

- A Chinese company with close ties to the Chinese Communist Party has secured exclusive development rights for the entire island of Tulagi, giving it the right to develop major infrastructure projects, and even possibly use the island for building strategic assets.

#### Details

- The New York Times reports that the China Sam Enterprise Group, a company with close connections to the Chinese Communist Party, has been given a renewable 75-year lease by the Solomon Islands.
- The provisions of the agreement explicitly include the building of an airport, a fishery base, an oil and gas terminal, but some clauses could be interpreted to allow for the building of strategic assets.
- Just before the deal, the Solomon Islands severed diplomatic relations with Taiwan– a key objective for Beijing around the world.

#### How and why are islands leased by countries?

- Territorial leases, which include leases of islands, are defined in the book 'International Law : A Dictionary' (Boczek, 1978) as "agreement(s), formalized in treaty form, whereby a state (lessor) leases part of its territory to another state (lessee), granting it, for a specified or non-specified period, more or less extensive rights, possibly including even the exercise of all sovereign rights, short of transfer of territorial sovereignty."
- In the 2015 book 'Territorial Leasing in Diplomacy and International Law', author Michael Strauss explains that states enter into territorial lease agreements when a transfer of sovereignty is considered too definitive a solution for resolving the problem at hand. As opposed to a complete transfer, leases are considered less extreme.

According to Strauss, the reasons why territorial leases are made include:

- The resolution of territorial disputes (eg. the lease of a port at Sevastopol, Ukraine, to Russia for its Black Sea naval fleet after the breakup of the Soviet Union)

### **16. Tulagi Island**

- Tulagi is part of the Solomon Islands, a sovereign country consisting of 6 large islands and over 900 smaller islands to the northeast of Australia in the Pacific Ocean.
- The island is considered important for its natural deep water harbor. Because of this advantage, Tulagi during World War II served as the Pacific headquarters for the Allied forces.
- After World War II, the Solomon Islands remained close to the West, but the equation began to change with the rise of China as an economic and military giant beginning in the 1980s.

- securing political objectives (the leasing of parts of China by European powers during the 19th century as opposed to annexing them, thus saving China's prestige)

#### **Concerns**

- The lease agreement has shocked Tulagi residents and alarmed U.S. officials who see the island chains of the South Pacific as crucial to keeping China in check and protecting important sea routes.
- The South Pacific region is rich in natural resources, and China's investments have provoked worries in the U.S. and Australia that the projects could give Beijing an opening to establish a military foothold for everything from ships and planes to its own version of the GPS.
- China is also pushing to end the region's status as a diplomatic stronghold for Taiwan.
- The fear is that these zones can, in turn, create enclaves of Chinese operations that could then grow over time into some kind of permanent strategic facility.

#### **Conclusion:**

- China's efforts in the region echo the period before and during the Second World War when Japan wrested control of island assets, which were won back in turn by American and Australian troops in bloody battles.
- China goes where there is value and interest. It is expanding its military assets into the South Pacific and is looking for friendly ports and friendly airfields just like other rising powers before them.
- With the U.S. pulling back in much of the world under President Donald Trump's America First policy, Beijing is often knocking on doors left open.

- \* China has 1,700 fighters, including 800 4-Gen fighters.
- \* A shortfall of over fighter squadrons has severely affected IAF's efforts to pose a challenge to the enemies.

#### **Is India the only country facing CAATSA sanctions?**

By coincidence, CAATSA has now been invoked by the United States twice already, and both times for countries buying the Triumf system from Russia.

- In September 2018, the U.S. State Department and Treasury Department announced sanctions on China's Equipment Development Department (EDD), the military branch responsible for weapons and equipment, for the procurement of the S-400 Triumf air defence system and Sukhoi S-35 fighter aircraft. The sanctions were triggered when the People's Liberation Army's took delivery of the systems.
- Washington expelled Turkey from the F-35 fighter jet programme in July 2019 after the first delivery of S-400s was received, and says sanctions are still under consideration unless Turkey reverses its deal with Russia.

#### **Is a sanctions waiver possible for India?**

- The exit clause in the CAATSA states that "The [US] President may waive the application of [CAATSA] sanctions if the President determines that such a waiver is in the national security interest of the United States."
- In August 2018, the U.S. Congress also modified the waiver clause to allow the President to certify that a country is "cooperating with the United States Government on other matters that are critical to United States' strategic national security interests".

Government officials including Foreign Secretary Vijay Gokhale, National Security Adviser Ajit Doval and Mr. Jaishankar have all expressed the hope that the U.S. will exercise this waiver for the S-400 deal to India for a number of reasons:

- That a militarily stronger India is in the U.S.'s interests,
- That India cannot completely drop its traditional dependence on Russian defence equipment without being weakened.

#### **What happens if a waiver is not granted?**

- Section 235 of the CAATSA legislation stipulates 12 kinds of punitive sanctions that the U.S. could place on a country conducting significant transactions in defence, energy, oil pipelines and cybersecurity technology with any of the U.S.'s "adversaries", and according to the Act, the U.S. President may impose "five or more of the sanctions described".

### **17. How will purchases from Russia affect India-U.S. ties?**

#### **Why is the S-400 deal important?**

- The agreement to purchase the Triumf missile system boosted India-Russia defence ties at a point of inflection in 2018.
- Russia has traditionally been India's biggest defence supplier, but was surpassed by the U.S. in the last few years, a fact that had added to a perceptible drift in bilateral ties.
- Mr. Putin and Mr. Modi addressed this drift with a special "reset" summit in Sochi, which was followed by Mr. Putin's visit to Delhi, when the deal was announced.
- The Indian Air Force has also backed the superior air defence system in that it will fill the gap in India's particular needs: countering its main adversaries and neighbours, China and Pakistan's growing air power, while dealing with a depleting stock of fighter aircraft.
  - \* Pakistan has over 20 fighter squadrons, with upgraded F-16s, and inducting J-17 from China in large numbers.



- These measures include export sanctions, cancellation of loans from U.S. and international financial institutions, ban on investments and procurement, restrictions on foreign exchange and banking transactions, and a visa and travel ban on officials associated with any entity carrying out the sanctioned transactions.
- None of these is expected to go into process until India takes delivery of the five S-400 systems it has paid an advance on, which are expected to begin in about 20 months and conclude by 2023.

#### **Implication on India's Arms Procurement from Russia**

CAATSA, if implemented in its stringent form, is likely to affect India's arms procurement from Russia in a number of ways.

- First, India's planned procurement from Russia, particularly the S-400 air defence system, Project 1135.6 frigates and Ka226T helicopters, will come under the immediate scanner of US authorities, as they are mandated to deter exports of key Russian defence entities
- Second, CAATSA is likely to affect all the joint ventures (JVs) – existing or planned — between Indian and Russian defence companies.
  - \* Some of the existing JVs that may come under the scanner are: Indo Russian Aviation Ltd, Multi-Role Transport Aircraft Ltd and Brahmos Aerospace.
- Third, the Act will also affect India's purchase of spare parts, components, raw materials and other assistance for which Indian entities are dependent on Russia for domestic licence manufacturing and maintenance of existing equipment.

#### **How would India react to USA on S-400?**

- India's firm-footed response to the U.S. threat of sanctions on the Russian S-400 is in sharp contrast to its decision to "zero out" oil purchases from Iran, which were sanctioned by the U.S. in 2018, and denotes that while the government is prepared to diversify its energy sources, it will not be bullied on its defence security options.
- CAATSA has the potential to heighten India's traditional insecurity about the United States as a reliable partner, and sour New Delhi's defence and security cooperation with Washington
- Given the stakes involved, the government hopes that the U.S. will put its burgeoning strategic, defence and business bilateral relationship with India above its rancour with Russia.

#### **Conclusion**

- While CAATSA is unlikely to be imposed on India anytime soon, it is nonetheless a dampener on an otherwise booming defence relationship between India and the United States.

- It is also practically impossible for India to ignore Russia in view of the latter's importance in meeting some of the critical defence hardware requirements of the Indian armed forces and also because of the overwhelming share of Russian weaponry in the Indian arms inventory, the upkeep of which necessitates New Delhi's continued dependence on Moscow for the foreseeable future.

### **18. Turkish incursion into Syria**

#### **Context**

- President Donald Trump's has withdrawn U.S. troops out of northeastern Syria on the border with Turkey

#### **Background**

#### **How many Kurds are there in Syria?**

- Kurds are the largest ethnic minority in Syria, making up between 5 and 10 percent of the Syrian population of 21 million in 2011. They live mostly in the north of the country, close to the border with Turkey, alongside Arabs and other ethnic groups.
- There are also large Kurdish populations in Turkey, Iraq and Iran, but there is no country with a Kurdish majority.



#### **How did Syrian Kurds become involved in the war?**

- As peaceful demonstrations against President Bashar al-Assad descended into an armed civil war in 2011 and 2012, various factions vied for control of Syria. These included pro-government militias, rebels fighting for a more democratic state, Islamist extremists, and militias from ethnic and religious minorities seeking to protect their areas from attack.
- Among them were several Kurdish militias, the strongest of which was the People's Protection Units, known by its Kurdish initials, the Y.P.G.

#### **PKK (Kurdish: Partiya Karkerên Kurdistanê )**

- It is a Kurdish far-left militant and political organization based in Turkey and Iraq.
- In 1978, Abdullah Ocalan established the PKK, which called for an independent state within Turkey. Six years later, the group began an armed struggle.



- Since 1984 the PKK has been involved in an armed conflict with the Turkish state (with a two-year cease-fire during 2013–2015), with the initial aim of achieving an independent Kurdish state, later changing it to a demand for equal rights and Kurdish autonomy in Turkey

#### **How did America become involved in the war?**

- For several years, the Obama administration resisted calls to play a direct role in the Syrian war, preferring instead to provide funding and training for some rebel groups.
- But President Barack Obama changed his mind as the Islamic State took advantage of the chaos of the war to capture vast swaths of Syrian and Iraqi territory.
- In 2014, the United States joined an international coalition against the militants, conducting airstrikes and later building military bases on Syrian territory to assist ground operations against ISIS.

#### **How did this Kurdish militia become an American ally?**

- As Islamic State fighters swept across Syria, the People's Protection Units emerged as one of the few Syrian armed groups consistently able to take on the extremists.
- When the international coalition, led by the United States, sought local partners to contain the militants, they saw the Kurdish militia as the safest option.

#### **Why do Syrian Kurds control so much land?**

- As the Kurdish militia gradually forced ISIS out of northern Syria — losing an estimated 11,000 troops in the process — it assumed governance of the land it captured.
- The militia eventually took control of about a quarter of the Syrian land mass, including most of the border with Turkey and areas mostly populated by Arabs and other ethnic groups.

#### **Current Scenario**

#### **Why does Turkey want to oust them from the area?**

- The militia is an offshoot of a Kurdish guerrilla group known as the Kurdistan Workers' Party that has waged a decades-long insurgency inside Turkey.
- Turkey sees Kurdish control of an area so close to its border as a major security threat, and fears that the area could become a haven for dissidents fleeing Turkey — or a springboard for insurgents plotting attacks on Turkish territory.

#### **Details**

- Post withdrawal the Turkish Armed Forces, together with the Syrian National Army, launched Operation Peace Spring
  - \* Turkey says the operation aims to clear the region of YPG/PKK terrorists.

- The Syrian Democratic Forces (SDF), led by the Kurdish People's Protection Units (YPG), was Washington's main ally in Syria in the fight against ISIL.

\* In recent years, they have expanded their control in northern and eastern Syria, in a vast area stretching 480km (300 miles) from the Euphrates River to the Iraq border.

- Turkey, which is fighting a violent Kurdish insurgency led by the Kurdistan Workers Party (PKK) in its Kurdish territories, sees an empowered YPG and a Kurdish autonomous government across the border a growing security threat to itself.

#### **USA's Pledge to protect SDF**

- In August 2019, the US military vowed to shelter the SDF from a Turkish attack, agreed to a "security mechanism" with Ankara, under which Kurdish forces would be pulled back from the Turkey-Syria border and a "safe zone" would be set up for the return of some of the 3.6 million refugees currently in Turkey.
- Following the agreement, the SDF destroyed YPG "fighting positions" in northeast Syria, before beginning to pull back from near the border.

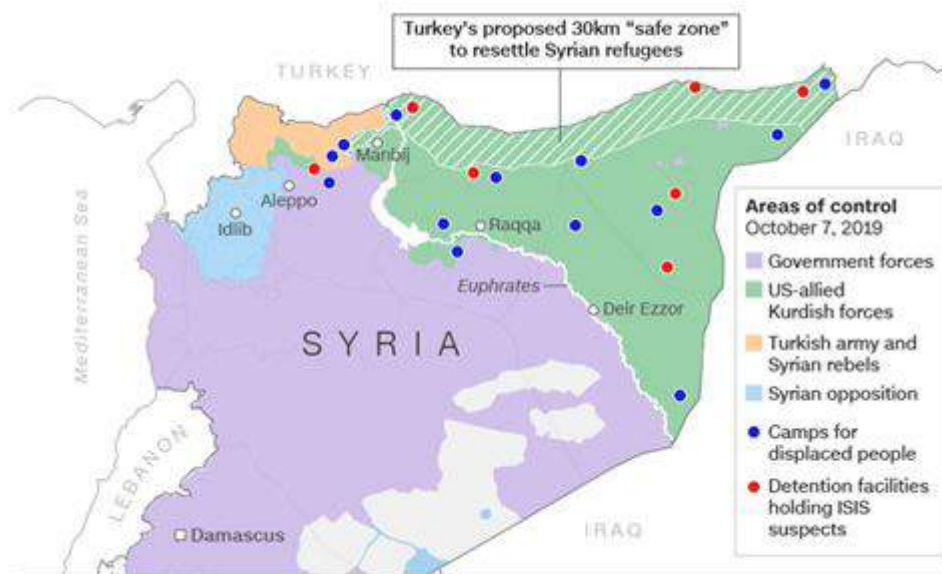
But Ankara, increasingly unnerved by the Kurdish presence near its border, has long accused Washington of taking "too long" to act on the security deal, and Erdogan announced an imminent "air and ground" operation to clear the border region of "terrorists".

#### **What Turkey intends to do?**

- Turkish President Recep Tayyip Erdoğan's plan is to carve out a buffer between the border and the Rojava, which will be controlled by pro-Turkish Syrian rebels.
- He also plans to resettle some Syrian refugees here. In its previous intervention, Turkey had already pushed the YPG out of Afrin, a border town.

#### **Why American withdrawal is advantage Turkey and disadvantage Kurds?**

The U.S. withdrawing troops is not the problem. The problem is the way in which it is abruptly disengaging itself and the potential consequences.



- The Kurds have played a critical role in defeating the IS, whose fall began in Kobane, the Kurdish town which was liberated by the YPG in early 2015.
- Also, if there is a Kurdistan government in northeast Syria today, it is because the Kurds have captured all the major cities in the region, including Raqqah, the de facto capital of the IS, with U.S. support.
- But now, with the destruction of the IS “caliphate”, the U.S. seems to be abandoning the Kurds. This has led to furor as this is tantamount to betraying the Kurdish forces who were in the forefront of the war against the Islamic State.
- The American presence may have held Mr. Erdoğan back, but with the White House saying that the U.S. troops “will not support or be involved” in the Turkish operation, the decks were cleared for Ankara.
- Mr. Trump could have opted for an orderly exit from Syria with security guarantees from Turkey for the Kurds. Instead, he has just given in to Turkey’s demands.

#### Concerns

- The Turkish military intervention can have wide-ranging consequences beyond the war zone. It would complicate the endgame in Syria.
- In a rare sign of unity, the Arab League has already condemned it. It could spill over into Europe where a significant number of Kurds and Turks live.
- This will lead to more destruction and chaos in the region with the untimely exit as IS cadres will now be activated.

- \* The IS caliphate was destroyed, not the IS. The remaining IS fighters have retreated to the Iraqi and Syrian deserts waiting for an opportunity to strike back.
- \* The Turkish incursion into Syria will not just set back the advances the Kurds have made in Rojava, but also weaken the most potent anti-jihadist force on the ground, besides throwing the whole region into disorder. It is a recipe for tragedy.
- \* Further, the SDF holds thousands of IS prisoners who may flee, taking advantage of the conflict, and unleash their abhorrent brand of terror.

#### Conclusion

- This sudden abandonment of the SDF by the U.S. would further diminish American credibility in this region. While diplomatic flux may intensify, most observers expect the hostilities to continue in the foreseeable future.
- Thus, the unfolding developments may, yet again, underline the Kurdish adage “Kurds have no friends except the mountains”.

### **19. Dharma Guardian**

#### Context

- Joint Military Exercise DHARMA GUARDIAN-2019 between India and Japan will be conducted at Counter Insurgency and Jungle Warfare School, Vairengte, Mizoram.

### About the exercise

- Indian Army and Japanese Ground Self Defence Forces (JGSDF) will participate in the exercise with an aim to share experience gained during various Counter-Terrorism Operations in respective Countries.
- Exercise DHARMA GUARDIAN is an annual training event which is being conducted in India since 2018.
- Notably, in the series of military training exercises undertaken by India with various countries Exercise DHARMA GUARDIAN with Japan is crucial and significant in terms of security challenges faced by both the nations in the backdrop of global terrorism.
- The scope of this exercise covers joint training on counter-terrorism operations in the jungle and urban scenario.
- The joint military exercise will enhance the level of defence co-operation between the Indian Army and the Japanese Ground Self Defence Forces (JGSDF) which in turn will further foster the bilateral relations between the two nations.

## **20. Ex Eastern Bridge – V**

### Context:

- The Indian Air Force participated in a bilateral joint exercise with the Royal Air Force Oman (RAFO), named Ex Eastern Bridge – V at Air Force Base Masirah in Oman.

### Details

- This is a joint bilateral exercise between the Air Forces of India and Oman.
- The previous exercise was held in 2017 at Jamnagar in Gujarat. 2019 marks the fifth edition of the exercise. The first such exercise was held in 2009 in Jamnagar.
- This is for the first time that the MiG-29 fighter aircraft will be participating in an international exercise outside India.
- The exercise will enhance inter-operability during mutual operations between the two Air Forces and will provide an opportunity to learn from each other's best practices.
- The participation of the Indian Air Force in the exercise will also promote professional interaction, exchange of experience and operational knowledge.
- Besides strengthening bilateral relations, it will also provide a good opportunity to the air-warriors to operate in an international environment.

## **21. Exercise Shakti**

- This joint bilateral exercise between the armies of India and France commenced in the year 2011.
- It is a biennial exercise (takes place once every two years) and occurs alternatively in India and France.
- The joint exercise will focus on counter-terrorism operations in the backdrop of semi-desert terrain under the United Nations Mandate.

- The training will focus primarily on high degree of physical fitness, sharing of drill at tactical level and learning of best practices from each other.
- The exercise aims at enhancing understanding, cooperation and interoperability between the two Armies.

## **22. IN-BN CORPAT**

### Context:

- India – Bangladesh navies undertake coordinated patrol in North Bay of Bengal.

### Details:

- The second edition of Indian Navy (IN) – Bangladesh Navy (BN) Coordinated Patrol (CORPAT) commenced in Northern Bay of Bengal.
- The two-day CORPAT was followed by the maiden edition of IN-BN Bilateral Exercise at Visakhapatnam.
- The IN-BN CORPAT which commenced in 2018, is aimed at upgrading to a bilateral exercise with the navies engaging in seamanship evolutions, flying exercises with integral helicopters and maritime patrol aircraft at sea.
- Additionally, exercises entailing the development of mutual communication and sharing of best practices would also be undertaken, adding a new dimension to the Indo – Bangladesh maritime relations.
- With a common territorial boundary of over 4000 km and a maritime boundary, navies of both the countries aim to practice and hone their mutual cooperation whilst patrolling near the International Maritime Boundary Line (IMBL) during the current edition of CORPAT.

## **23. India-Philippines Business Conclave**

### Conclusion

The President of India, Shri Ram Nath Kovind, addressed the India-Philippines Business Conclave and the 4th ASEAN-India Business Summit in Manila, Philippines.

Agreements between India and Philippines

### India and Philippines have entered into four agreements which includes

- Science and Technology,
- Maritime
  - \* exchanging of white shipping data that includes identification and information about the movement of commercial and non-military vessels
- Tourism
- Culture

### Significance

- The president's visit coincides with the 70th anniversary of the establishment of diplomatic relations between the two countries.

- Agreements between both countries will not only strengthen the bilateral relations but also put an impact on China and its dominating image in the region.
- The Philippines can emerge as one of the most focused countries for India's corporate business expansion. India and Philippines economic-ties can achieve new heights.
- India is hoping to get defence cooperation and participation in weapon modernization of Philippines.
- Several Indian companies are looking for investment opportunities in the health, innovation and pharma sectors.

## **24. India, Saudi Arabia constitute Strategic Partnership Council**

### **Context**

- Prime Minister announced the formation of the India-Saudi Strategic Partnership Council with Saudi Arabia

### **Strategic Partnership Council:**

- India and Saudi Arabia formed their strategic partnership by signing an agreement to form a council headed by Prime Minister Modi and King Salman.
- It would enable regular monitoring of the progress of the strategic partnership.
- The council will have two parallel mechanisms under it — one to look at political and diplomatic ties and the second to supervise commercial and energy ties.
- This is a major development since Saudi Arabia is now only the fourth country with whom India has an inter-governmental mechanism headed by the prime minister.
- Germany, Russia and Japan are the other three.

## **25. Death of a terrorist**

### **Context:**

- Abu Bakr al-Baghdadi, the founder-leader of the Islamic State (IS) was killed in a night raid by U.S. Special Forces in northwest Syria.

### **Growth of IS**

- At the height of its power in 2014, the Caliphate established by Baghdadi controlled 1 lakh sq. km territory straddling the Iraqi-Syria border from Deir Ezzor in eastern Syria to Mosul in northern Iraq with Raqqa as its de facto capital.
- The Caliphate drew in radicalised young Muslims world-wide into its fold. One estimate puts the number of foreign fighters at around 35000 from more than 80 countries.
- The IS carried out around 6600 attacks in the 2007-2018 period, killing about 43516 people.
- It fought the Syrian and Iraqi national armies as well as rebel groups in Syria, and unleashed violence against anyone who disagreed with its version of Islam and against minority groups in Islam and non-Muslims.

- IS claimed the establishment of its affiliates in countries like Algeria, Libya and Tunisia.
- A growing number of terrorist organizations from around the world like the Boko Haram from Nigeria owed allegiance to IS and had begun collaborating.
- A growing number of lone wolf attacks claimed allegiance to the IS.

### **The Decline:**

- Recognizing the threat posed by the IS, a Global Coalition to Counter the Islamic State of Iraq and the Levant was set up in 2014. It is a group of countries and non-state actors working together to defeat the ISIS, led by the United States.
- The codename for the joint operations against ISIS is called Operation Inherent Resolve.
- Following multi-pronged and co-ordinated military operations against the IS, by 2016, IS had lost much of its territory on the Syria-Turkey border to the Kurdish forces and Fallujah in Iraq.
- In 2017, IS lost both its capital Raqqa in Syria and the historic city of Mosul in Iraq, signifying the beginning of its reign's end. By 2018 the IS had witnessed severe territorial losses.
- By March 2019, the IS was driven out of the last pocket of land it held in Baghuz. The capture of senior IS leaders in May 2019 followed by the death of its leader has delivered a body blow to IS, which is at its weakest point of its short history.

### **Concerns:**

- Though the IS has lost control of its previous territories and the subsequent revenue sources the jihadists who owe allegiance are still on the run. The so-called lone wolves are likely to seek revenge.
- Baghdadi's death does not mean that the group is defeated because, the IS, like its peers in global jihadism such as al-Qaeda, is not completely a leader-dependent organisation. It is fundamentally an insurgency comprising ideologically linked autonomous cells that are loyal to one leadership. So Baghdadi's death, while a blow to the organisation and its propaganda, does not mean that IS operations are over.
- The geopolitical conditions that led to the IS's creation have not changed much. When Syria began plunging into chaos in the early days of the civil war in 2011, the al-Qaeda in Iraq (AQI), under Baghdadi's leadership, morphed into a bigger, more powerful terrorist machinery — the IS.
- The present situation in Syria remains the same providing fertile ground for the birth of other terrorist organizations.
- According to a 2015 study by the Financial Action Task Force, one of IS's five primary sources of revenue included donations from Saudi Arabia and Gulf states, often disguised as meant for "humanitarian charity". IS has not been completely cut off from sources of finance.



- IS use of social media such as Twitter and Telegram continues unabated to spread its propaganda and for fundraising. It has been successful in indoctrinating followers and sympathisers to initiate ramming and attacks. This threat still remains.

#### **Way forward:**

- With the IS's double loss of territory and leadership, the focus should now be on stabilising Iraq and Syria and ending the conditions that led to the rise of the IS. Otherwise, Baghdadi's death would not mean much for the global fight against terrorism.
- The campaign against the Islamic State (IS) is not over. The security forces have to prepare for a long battle to thwart the group's ideology and brace for retaliation by Islamic State loyalists, including "lone wolf" attacks by radicalised locals. The fight still continues to finally defeat the terrorist organisation materially and ideologically.

## **26. India, Pakistan sign Kartarpur pact**

#### **Context:**

- India and Pakistan have signed an agreement to operationalize the Kartarpur corridor that will facilitate pilgrims from India to visit the Gurdwara Kartarpur Sahib in Pakistan.

#### **Kartarpur Corridor:**

- The corridor will connect Darbar Sahib in Pakistan's Kartarpur with Dera Baba Nanak shrine in Gurdaspur district and facilitate visa-free movement of Indian Sikh pilgrims.
- The pilgrims will have to just obtain a permit to visit Kartarpur Sahib.
- It was established in 1522 by Sikh faith founder Guru Nanak Dev.
- The Kartarpur shrine has one of the last copies of the original Guru Granth Sahib; there are some who believe that it contains not only the wisdom of the 10 Gurus but is itself the 11th and last Guru.
- The corridor at Narowal, around 125 km from Lahore, is expected to be opened on the occasion of the 550th birth anniversary of Guru Nanak in November.

#### **Details:**

- The agreement is valid initially for five years.
- India will hand over the list of pilgrims to Pakistan 10 days in advance and those granted permission to go may be informed only four days before the proposed date of travel.
- The list of "do's and don'ts" for the pilgrims, has been issued by the Ministry of Home Affairs (MHA).

#### **Way forward:**

- The Kartarpur Project could provide a mechanism for broader conversations between India and Pakistan.
- The template that Kartarpur has given both sides is also worth considering for the format of other bilateral negotiations.
- The obvious extension from this would be for having other faith-based corridors for Hindu, Muslim and Sikh pilgrims in both countries; this would be in addition to the list of 20 shrines (15 in Pakistan, five in India) that were negotiated under the 1974 Protocol on visits to Religious Shrines.
- Both countries must make use of the Kartarpur template for other bilateral negotiations.

## **27. Mallapuram Informal Summit- India and China**

### **What is Informal Summit?**

- Informal Summits act as supplementary exchanges to annual Summits and other formal exchanges such as the G20 Summit, EU-India Summit and the BRICS Summit among others, and allow for "direct, free and candid exchange of views" between countries, something that may not be possible to do through formal bilateral and multilateral meetings that are agenda driven, where specific issues are discussed, and outcomes are more concretely defined.
- Informal Summits may not take place on a fixed annual or biennial schedule; they are impromptu in the sense that they take place when a need for them is perceived by the concerned nations
- Since Informal Summits allow discussion on wide-ranging issues, they are not particularly purpose-specific, and are sometimes considered to play bigger roles in diplomatic dialogue than formal exchanges — the reason is that they tend to be more in-depth, and relatively flexible in intent and the scope of discussion.

### **Examples**

- The intergovernmental organization ASEAN held four Informal Summits in the years 1996, 1997, 1999, and 2000.
  - \* And in 2018, Prime Minister Narendra Modi attended the ASEAN-India Informal Breakfast Summit in Singapore.
- In 2018, Modi met Russia's President Vladimir Putin for their first Informal Summit in Russia's Sochi to discuss international matters in a "broad and long-term perspective".
- For instance, in Wuhan, Prime Minister Modi and President Xi discussed a range of subjects, including the India-China boundary question, bilateral trade and investment, terrorism, economic development and global peace, and reached a "broad consensus".



### **Why Mamallapuram was chosen for the second Informal Summit?**

- The venue of Prime Minister Narendra Modi's meeting with China's President Xi Jinping over has been referred to, interchangeably, Mamallapuram and Mahabalipuram.
- It is 56 km to the south of Chennai on the coast.
- Its name is derived from Mamallan or 'Great Wrestler' — one of the names of Narasimhavarman I, the Pallava monarch who ruled from 630 AD to 668 AD, and who commissioned much of the architecture Mamallapuram is famous for.
- The name Mahabalipuram emerged much later, sometime in the Vijayanagara period (14th-17th centuries). But there is nothing to directly connect the Asura King Mahabali with Mamallapuram

### **Rule of the dynasty**

- Narasimhavarman I is credited with excavating the stone caves of Mamallapuram, it was Mahendravarman I, Narasimhavarman's father who ruled from 600 AD to 630 AD, who was the pioneer of Pallava rock-cut architecture.
- The successors of Narasimhavarman I, especially his grandson Parameswaravarman I (670-695 AD) and his great grandson Narasimhavarman II (700-728 AD), continued to build in Mamallapuram.
- Narasimhavarman II, also known as Rajasimha Pallava, built the magnificent Shore Temple among others in Mamallapuram, as well as grand temples at several other places, including the famous Kailasanathar Temple at Kancheepuram.

### **Mahabalipuram's China connection**

The choice of Mamallapuram was, perhaps, not as arbitrary as it might seem.

- It was during the reign of Narasimhavarman I that Hiuen Tsang, the Chinese Buddhist monk-traveller, visited the Pallava capital at Kanchipuram.
- Narasimhavarman II built on the work of earlier Pallava kings to consolidate maritime mercantile links with Southeast Asia.
- If Wuhan was picked by President Xi Jinping as the venue in 2018 to demonstrate China's economic resilience and might
  - \* Wuhan, the site of the first informal summit, is the place where Mao Zedong had displayed his vitality by swimming in the currents of the Yangtze river.
  - \* Today, it straddles the great rail connectivity route to Europe envisioned in the BRI

- Mamallapuram is symbolic of India's 'soft power'.
  - \* Mamallapuram and the Pallava dynasty are also historically relevant, for the earliest recorded security pact between China and India (in the early 8th century) involved a Pallava king (Rajasimhan, or Narasimha Varma II), from whom the Chinese sought help to counter Tibet, which had by then emerged as a strong power posing a threat to China.
  - \* The Descent of the Ganga/Arjuna's Penance, a rockcarving commissioned by Narasimhavarman I, with its depiction of the Bhagirathi flowing from the Himalayas, may serve as a reminder of the geography of India-China relations, and their shared resources.
  - \* Bodhidharma, the founder of the Dhyana School of meditation at the Shaolin monastery in Henan province in China, hailed from this region.

### **What happened in the Wuhan Informal Summit?**

- At the first Informal Summit between India and China held in Wuhan in 2018, Modi and Xi met "to exchange views on overarching issues of bilateral and global importance, and to elaborate their respective visions and priorities for national development in the context of the current and future international situation".
- The Wuhan Summit achieved a "re-set" of the Sino-Indian relationship after the two-month long border standoff at the India-China-Bhutan trijunction in Doklam.
- Significantly, at Wuhan, the two leaders decided to give "strategic guidance" to their military, so that issues did not escalate as in the case of the Doklam standoff.

### **After the Wuhan Summit, many things have changed, altering the circumstances surrounding India-China relations.**

- For instance, relations between China and the U.S. have sharply deteriorated.
- Apart from the U.S., a vast majority of nations in the West have cooled off towards China.
- In 2018, the China-Russia axis appeared to be carving out an exclusive zone of influence in East Asia, by mid-2019, new alignments, including a further strengthening of India-Russia ties, as also a new triangular relationship of Russia, India and Japan, appear to be altering equations in the East Asian region.
- China's Belt and Road Initiative (BRI) has also come under increasing attack, even from countries which previously viewed China as a munificent nation.
- China's domestic scene is again marked by heightened anxiety today.

- The economy is far more fragile than in early 2018, as exemplified by the jitters emanating from China's equity and currency markets, and the decline in growth rates.
  - \* Internal security concerns such as unrest in Tibet, inroads made by radical extremist groups in Xinjiang and the latest turn of events in Hong Kong are also reinforcing fears about the leadership's ability to control the situation.
  - \* The relentless attack by the U.S. and President Trump on China's economic practices has only aggravated this mood of pessimism.

### **Three historical forces that shaped India-China relations.**

Some of these forces have been pushing both countries towards competition and some impelling them towards cooperation and collaboration.

- The first is a changing world order and the rise of Asia, a phase that is generally traced to the period after the 2008 global economic crisis.
- The second is the idea that with the West's declining capacity and inclination to responsibly manage international and Asian affairs, India, China and other re-emerging powers are being thrust into new order building roles that would require coordination and cooperation to preserve global stability and co-develop new governance institutions and norms.
- The third is a changing South Asia with China's 2013 and 2014 policy declarations of deepening ties with its periphery including with subcontinental states, followed soon after with the ambitious Belt and Road initiative and the China-Pakistan Economic Corridor in April 2015.

### **China's concerns**

India, on the other hand, has reasons to be more optimistic than a year ago.

- India's relations with the U.S. have attained a new high.
- Relations with Russia have acquired a fresh dimension, incorporating economics alongside a longstanding military relationship.
  - \* India's line of credit to develop Russia's Far East has fundamentally changed the nature of India-Russia relations.
- India's relations with Japan have greatly strengthened. The Quadrilateral (the U.S., India, Japan and Australia) has gained a new lease of life.

### **Some stress points**

- China's public support for Pakistan on Jammu and Kashmir has created a new stress point.
- During Pakistan Prime Minister Imran Khan's visit to Beijing, Mr. Xi is reported to have stated that China is "paying close attention" to the situation in Kashmir and that China would support Pakistan on its core interests, inviting a quick riposte by the Indian Foreign Ministry that it is not for others to comment on the internal affairs of India.

- China maintains that the question of Jammu and Kashmir should be settled on the basis of the UN Charter, UN Security Council resolutions and bilateral agreements.
  - \* What is of note is that its boundary agreement with Pakistan of March 2, 1963 and the China-Pakistan Economic Corridor (CPEC) have de facto altered the status quo and violated the spirit of the very UN Security Council Resolutions that China cites in support of Pakistan.
  - \* China holds approximately 38,000 sq km of land in Aksai Chin and a further 5,180 sq km illegally ceded by Pakistan to China under the 1963 agreement.

### **Three-Point Road Map**

Going forward, India's China policy should be guided by three grand strategic goals:

- an inclusive security architecture in Asia that facilitates a non-violent transition to multipolarity without disrupting economic interdependence;
- a fair and rules-based open international order to better reflect Indian and developing economy interests;
- Geopolitical peace and sustainable economic development in the neighbourhood.

### **Conclusion**

- The "institutionalisation" of such Summits would help in strengthening the "strategic communication" between the countries, irrespective of the political party in power.
- But India needs to proceed with utmost caution, lest China reacts in a manner that would undermine the 'Wuhan spirit'. India must ensure that it does not provoke China to the point where it would be inclined to indulge in 'adventurism'.
- India can try and seek answers on how to deal with today's China, from the "wisdom of the orient." Reading up on treatises such as Sun Tzu's 'Art of War' would help. "Subduing the enemy without fighting" has been a recurrent theme in Chinese thinking, and while informal summits have their uses, it is imperative not to overlook this aspect.
- The historian Odd Arne Westad recently advised, "The more the U.S. and China beat each other up, the more room for maneuver other powers will have." One could equally apply that mantra to India and China. Unrestrained competition only benefits other powers.
- The recent stability in India-China relations is a choice made by both sides. History is obliging both countries to step up and play constructive roles to shape the emerging world order even as it is impelling both sides to learn to co-exist in a common neighbourhood.

- China expects the world to accommodate its rise and core concerns on Tibet, Xinjiang, Taiwan and Hong Kong. Likewise, China too needs to adjust to the rise of India and accommodate its concerns on sovereignty and territorial integrity. This could pave the way for furthering cooperation under the India-China Plus framework.

## **28. Summit will usher in 'new era' in India-China ties, says**

### **Modi**

#### **Context**

- After the second India-China "informal summit", Prime Minister Narendra Modi said this would usher in "a new era" in ties that had seen "increased stability and fresh momentum" after the first summit between him and President Xi Jinping in Wuhan

#### **Details**

- The first informal summit between India and China in Wuhan led to fresh stability in relations between the two countries. It gave a fresh momentum and strategic communication between the two countries
  - \* China and India are the only two countries with a population of more than 1 billion, maintaining and developing good relations between the two countries is a must for stable development
  - \* Under the current international circumstances, the two countries shoulder increasingly important responsibilities in safeguarding global stability and promoting development
- Mr. Modi referring to the Wuhan summit said, "We had decided that we would prudently manage our differences and not let them become disputes, be sensitive to each other's concerns, and be a reason for peace and stability in the world."
- During talks, India and China agreed to set up a high-level economic and trade dialogue mechanism. It would include Finance Minister Nirmala Sitharaman and China's Vice-Premier Hu Chunhua
  - \* India's trade deficit with China has been thorn in New Delhi's side for more than 15 years. Last year, the deficit was around \$53 billion, while total bilateral trade stood at \$95 billion.
  - \* It has three-pronged objective of enhancing trade volumes, bridging the massive bilateral trade deficit, and increasing mutual investment in sectors agreed upon

### **Xi moots 100-year plan to cement ties with India**

- President Xi said we should have a plan for next 100 Years from a strategic and long-term perspective, inject impetus into the development of China-India relations, and work together to realise the great rejuvenation of the two great civilizations of China and India
- The Chinese President stressed that "military security exchanges and cooperation" between the two countries must be "earnestly" improved.

- \* This will be promoted by development of relations between the two militaries along the correct direction of increasing trust and dispelling doubts and friendly cooperation, and carry out activities such as professional cooperation and joint training, continuously enhance mutual trust between the two militaries, strengthen cooperation between law enforcement and security departments, and maintain regional security and stability

- Mr. Xi also advocated the relevance of gradually expanding the "China-India plus" cooperation to South Asia, Southeast Asia and Africa.
  - \* When both the countries have interests in a region or in countries, conflict should be avoided. This is by bringing about consensus and mutual cooperation
  - \* The China-India plus initiative, first proposed at the Wuhan informal summit in 2018, is a mechanism of prior consultation to manage overlapping interests of India and China in Asia, Africa and the Indian Ocean
- Mr. Xi also called for "fair and reasonable" solution to the "boundary problem" that is acceptable to both parties based on "Political Guiding Principles Agreement" agreed to by the two countries in 2005.
  - \* The differences on the boundary question should not be allowed to affect the overall development of bilateral relations.
  - \* The two sides will resolve the boundary question through peaceful and friendly consultations. Neither side shall use or threaten to use force against the other by any means.
  - \* The final solution of the boundary question will significantly promote good neighbourly and friendly relations between India and China.

## **Chennai Connect**

### **Introduction**

- Gains of the Mamallapuram informal summit between Prime Minister Narendra Modi and President Xi Jinping were incremental and optical.
- The most concrete takeaway was the decision to establish a "High-Level Economic and Trade Dialogue", with three intersecting objectives:
  - \* "To deepen economic cooperation";
  - \* To achieve "enhanced trade and commercial relations, as well as to better balance" bilateral trade,
  - \* To "encourage mutual investments in identified sectors through ... a manufacturing partnership".

### **Market Access to India in China**

- The Modi Govt since 2014 is offering China greater market access — provided India genuinely gains from Chinese investments, and provided economic engagement moves beyond a buyer-seller relationship.

- Separately, Modi hopes to continue to press China for greater market access for products and services where Indian companies are competitive.
- Recent Chinese permission for an Indian pharma company to bid for a drug-supply contract within their public health system represents a new start, but only a first step.

### **Kashmir and Issues of Terrorism**

- It would, however, have been unrealistic to expect that this meeting would lead to the removal of all the irritants that have plagued the relationship in recent months, principal among them being the manner in which China had backed Pakistan's efforts to take the Kashmir issue to various bodies of the United Nations.
- That the two sides did not raise or discuss the Kashmir issue was an indication that Mr Modi and Mr Xi were looking at consolidating the strategic guidance and communications that had emerged from the Wuhan meeting and helped bridge some of the gaps between the militaries of the two countries.
- Too much should not be read into a reference in the Indian statement, issued after the meeting, about joint efforts to counter the training, financing and support for terror groups, at least not until China shows it is willing to ask its all-weather ally Pakistan to tackle this issue decisively.
- Mr Xi's call for developing military-to-military relations to enhance trust and an invitation to the Indian defence minister to visit China, however, are significant.

### **Conclusion**

- India often sees China through the prism of its ties with Pakistan, while China looks constantly for an American role in Indian actions.
  - \* Both the China-Pakistan Economic Corridor and the U.S.-India joint Indo-Pacific vision have further derailed bilateral trust.
- It is thus necessary to remove the worry of "third parties" from the room if New Delhi and Beijing are to move beyond laying the foundations of engagement and building atmospherics to actually resolving the serious issues they have in territorial, economic and strategic areas.
- Only when they see each other as independent and autonomous decision-makers will the leaders realise their vision of an Asian century where the "elephant and dragon" learn to dance.

### **Bodhi Dharma**

- The Pallava prince from Kanchipuram renounced the throne, became a Buddhist monk, known as Bodhi Dharma in India and DaMo in China, almost like how prince Siddhartha became Buddha.
- His guru asked him to go to Zhen Dan- today's China.
- Bodhi Dharma, who became India's first spiritual ambassador to China, also emerged as its chief mentor.
- Regarded as Buddhaabidara (Buddha's Avatar), he expounded Zen Buddhism and founded the famous Shaolin Temple in China's Henan province.

### **Bodhi Dharma's foray was not limited to China.**

- Popular as DaMo in China, as Dalma in Korea, Daruma in Japan, Dharmottara in Tibet, with his name echoing in Vietnam too, he ended up as India's cultural ambassador to most of Asia.

## **29. Making a friend of the neighbour**

### **Introduction**

- Every government will have to factor in three geopolitical constituents while setting its broader foreign policy trajectory —
  - \* immediate neighbourhood,
  - \* extended neighbourhood and
  - \* great powers
- An emerging power should stay focused on building capacities while maintaining good ties with the neighbours, deep engagement with the extended neighbours and balancing between great powers.
- India has a hostile relationship with Pakistan, but has cultivated strong partnerships with the other neighbouring countries. It has deepened engagement with the extended neighbourhood, which, for India is both a source of energy and a transit to the rest of the world.
- Though there's a pro-American tilt in its foreign policy, New Delhi has been wary of not disturbing the equilibrium between the great powers and rising great powers.

Of this, relations with Beijing are doubly critical for India as China is both a neighbour and a rising great power.

- But there are structural problems in ties —
  - \* the boundary dispute,
  - \* The Pakistan factor,



- \* Historical mistrust.

The conventional understanding of the India-China relationship is centred on these challenges.

#### **A look at history and its current Linkage**

- India-China ties have seen a turnaround over the past three decades, since Prime Minister Rajiv Gandhi's 1988 visit to Beijing, to be specific. Since then, the countries have decided to strengthen ties in areas that were not constrained by structural issues.
  - \* Economy was the chosen field, as in the early 1990s, India, following China's footsteps, started liberalising its economy.
  - \* Trade ties between the two countries boomed over the years (it touched \$95 billion last year), though it's largely skewed towards China as the latter was fast emerging as an industrial and technological powerhouse.
  - \* The border has been largely peaceful during this period.
- Even when the Chinese and Indian militaries were in a standoff in Doklam at the India-China-Bhutan tri-junction in the Himalayas in 2017, both governments were careful enough not to let the situation spiral out of control.
  - \* That the Doklam incident was followed by the first informal summit in Wuhan in 2018 between Mr. Modi and Mr. Xi, with an aim of dialing down tensions and rebooting ties, showed how New Delhi and Beijing look at each other.
  - \* They don't share the antagonism of conventional wisdom. The Mamallapuram summit should be seen against this background.

#### **Challenges for both countries**

The test before Mr. Modi and Mr. Xi is to deepen the relationship, and for that they should not allow strategic glitches dictate terms for a bilateral partnership. In this, they face fresh challenges today.

- India and China warmed up to each other in a different world. The U.S. and China were in a better relationship. Beijing's focus was entirely on economic development and "peaceful rise". It was also the beginning of the golden age of globalisation and free trade that softened borders between big trading and investment partners.
- Now, U.S.-China ties have turned hostile at a time when India is steadily enhancing its strategic partnership with Washington.

- \* China under Mr. Xi is also a more assertive and confident power.
- \* Both the U.S. and China see India as "a swing power".
- \* Washington wants India to swing to its side and join its Indo-Pacific strategy, the undeclared aim of which is to contain China's rise.
- \* Beijing, obviously, doesn't want India to swing to the other side.

- Second, the Pakistan factor looms large over ties. With Mr. Modi's nationalist government taking an aggressive approach towards Pakistan and cracking down on Kashmir, Beijing's Pakistan card is now stronger.
- Third, the border disputes remain unresolved, and are unlikely to be resolved in the near future.

#### **Taking it to the next level**

1. The avenues of economic cooperation between the two countries are still wide open.

- China is keen to make investments in India, especially in building infrastructure and fifth generation technology architecture.
- India, on the other side, wants greater market access in China, and action by Beijing to address the trade imbalance.
- At the Wuhan summit, both Mr. Modi and Mr. Xi had, in principle, agreed to India-China cooperation in projects in third countries. They could perhaps come up with a plan to take economic ties to the next level, addressing mutual concerns.

2. Second, India and China are pillars of an emerging world order.

- Both countries see the unilateral world order in decline, and are champions of multilateralism.
- Security and stability in Asia, which is billed to be the 21st century's continent, is in the common interests of both countries, and they are already cooperating on global issues like tackling climate change.

3. Third, China had shown in the recent past that when it comes to deal-making and tackling international pressure, the Pakistan card is negotiable.

- When India is patient, has the international opinion in its favour, and is cautiously bargaining for China's action against Pakistan, Beijing has taken U-turns on its "iron friend". 2018, it agreed to Pakistan being placed on the FATF grey list, after India offered support for China's vice-chair push at the FATF.



- Earlier in 2019, amid mounting international pressure, China removed its technical hold on the declaration of Masood Azhar as an international terrorist.
  - So it's critical for New Delhi to stay engaged patiently with Beijing on issues related to Pakistan
4. Last, and most important, there has to be a doctrinal consensus in India's foreign policy thinking.
- Should it
    - \* compete with China for dominance of Asia or
    - \* Should it stay focussed on its own rise in which competition with China will be a part?

- India should perhaps learn from both China's rise and its engagement with the U.S. post Nixon's visit. For decades, China hid its strength, bid for time. It was building capacities without letting external strains to derail the process.
  - \* Now it's confidently challenging the U.S., at least in the sphere of the economy.
- India should also turn the focus to its rise and building capacities, not on conflicts and rivalries. If it's driven by such a broader but a realist vision, India could expand the avenues of deep tactical engagement with a powerful China.

# SOCIAL ISSUES

## 1. Vayoshreshtha Sammans

### Context:

- The President of India presented the Vayoshreshtha Sammans – a scheme of National Awards for senior citizens of the Ministry of Social Justice and Empowerment in New Delhi.

### Details

- The Ministry of Social Justice and Empowerment decided to initiate a national awards scheme for senior citizens in 2005.
- The Vayoshreshtha Sammans is conferred upon senior citizens and institutions in recognition for their service to the elderly, especially indigent senior citizens.
- The award scheme was elevated to the level of national awards in 2013 under 13 categories.
- The awards are given every year.
- The awardees are announced on 1st September and distributed on 1st October. 1st October is observed as the International Day of Older Persons.
- The recipients receive a citation, a plaque and a cash award.

### International Day of Older Persons:

- This day is observed on 1st October every year.
- It was initiated by the UN in 1990 and the first International Day of Older Persons was marked in 1991.
- The day is celebrated by raising awareness about issues affecting the elderly, such as senescence and elder abuse. It is also a day to appreciate the contributions that older people make to society.
- Theme for 2019: The Journey to Age Equality.

## 2. Warli

- They are an indigenous tribe or Adivasis, living in mountainous as well as coastal areas of Maharashtra-Gujarat border and surrounding areas
- The Warlis speak an unwritten Varli language, classified as Konkani, with some degree of influence from the Gujarati language.

### Painting

- It is vivid expression of daily & social events of Warli tribe, used by them to embellish the walls of village houses.
- It uses very shapes: a circle, a triangle and a square. The circle represents the sun and the moon, the triangle derived from mountains and pointed trees, the square indicates a sacred enclosure or a piece of land.
- Painted on austere mud base using one color.
- Human and animal bodies are represented by two triangles joined at the tip; the upper triangle depicts the trunk and the lower triangle the pelvis. Their precarious equilibrium symbolizes the balance of the universe

## 3. Miles to go before becoming open defecation-free

### Context

- October 2nd 2019 was Mahatma Gandhi's 150th birth anniversary, it was also the anniversary of the Swachh Bharat Mission.
- Speaking in Gujarat, Prime Minister Narendra Modi declared India "open defecation-free".

### Definition

- Open defecation free is broadly defined by the absence of visible faeces in the environment.

### What is the government's strategy?

To achieve its goals under the Swachh Bharat Mission, the government outlined a three-pronged strategy:

- using social messaging, education and communication to trigger behaviour change
- providing subsidies to vulnerable social groups to help them construct latrines at home
- Verifying and monitoring the continued use of these latrines through surveys and social audits.

### A look at numbers

- In the past five years, the Indian government has built 100 million toilets.
- This implies that it constructed 38 toilets every minute that had passed since the Swachh Bharat Mission was launched. With a country as large as India, this is a big achievement.

### **But has this led to open defecation society in reality?**

- Many reports have found that several people in villages across India, including the national capital, were still forced to defecate in open due to lack of toilets, especially in impoverished colonies.
  - \* Several do not meet construction standards
- People in few pockets in the states like Bihar, Uttar Pradesh, Rajasthan and Madhya Pradesh have functional latrine but have continued to defecate in the open.
  - \* Most believe that emptying even a decomposed latrine pit would be ritually polluting and would cause them to become outcaste
- Scarcity of water
  - \* Household water connections were not available and therefore toilets constructed under SBM could not be used.
  - \* Many people are still relieving themselves in the open due to lack of water connectivity
- The government has been making ODF declarations on the basis of latrine ownership rather than actual latrine use.

### **Other areas that need introspection**

- Triggering behavioural change through “Information, Education and Communication” is one of the key components of Swachh Bharat. The Mission has been given the highest advertising and promotion budget from the Centre compared to other schemes.
  - \* Most of those funds have been directed towards media publicity on radio, TV or in print, rather than on grassroots-level awareness campaigns.
- India generates over 150,000 tonnes of municipal solid waste per day. Only 83% of waste is collected and less than 30% is treated. As noted above, the government has chosen to prioritise toilet construction at the cost of waste management services.
- Lives of manual scavengers across Indian cities do not seem to have changed much in the years of SBM.
- Many rural Indians were threatened with or even denied their legal rights, such as PDS ration, for not building a latrine. Officials resorted to threats of fines and jail terms to intimidate people in some places.

### **Conclusion**

- Officials and campaigners have resorted to violence, public shaming and the threat of deprivation of welfare benefits to bring about compliance. Such methods must be ended immediately and voluntary participation encouraged.
- The spirit of bidding farewell to open defecation as a gift to Gandhi deserves accolades. But we must not forget that there are still miles to go.
- India needs to have a sanitation policy that focuses on reducing open defecation. And most importantly, it should follow Gandhi's path of ahimsa and compassion.

### **4. Deendayal Upadhyaya Institute for the Physically Handicapped**

- It is an autonomous organisation under the administrative and financial control of Ministry of Social Justice and Empowerment
- The Institute for the Physically Handicapped came into being when the erstwhile Jawahar Lal Nehru Institute of Physical Medicine and Rehabilitation and other allied institution run by the council for the Aid of crippled & handicapped were taken over by the Government of India in 1975 and converted into an autonomous body in the year 1976.
- It was renamed after Pandit. Deendayal Upadhyaya in the year 2002.
- The institute aims to serve the physically disabled of all age groups
  - \* By co-operating with national, regional or local agencies in research or such other activities as may be designed to promote the development of services for the disabled persons.

### **Context**

- President Interacts with Rehabilitated Divyangjan Children at Pt. Deendayal Upadhyaya National Institute for Persons with Physical Disabilities.

### **5. National Council on India's Nutrition Challenges**

- This Council was set up by the Ministry of Women and Child Development under the POSHAN Abhiyaan.
- The objectives of the Council are:
  - \* To provide policy directions to address India's nutrition challenges through coordinated inter-sectoral action

- \* To coordinate and review convergence among ministries
- \* To review programmes for nutrition on a quarterly basis

**Context**

The Union Minister of Women and Child Development Ms. Smriti Irani chaired the 5th National Council on India's Nutrition Challenges. It was decided to set up a National Advisory Panel for Agri Nutrition.

# SCIENCE AND TECHNOLOGY

## 1. **Biotechnology sector- Different peas in different pods**

### Introduction

- India is among the first countries to set up a specialized agency for the development of research and human resources in the biotechnology sector.
- After decades of development, it is imperative to ask: has the biotechnology sector lived up to its promise? More importantly, is the sector poised to stand shoulder-to-shoulder with, if not beat, the IT sector in creating jobs for the future?

### The environment of IT and BT are different

- Biotechnology research often requires access to laboratories with high-end scientific infrastructure, the supply of expensive chemicals and reagents with minimum shipping time between the supplier and the user, and a disciplined work culture and documentation practice due to regulatory and intellectual property filing requirement.
- Additionally, unlike the products and solutions from the IT industry, biotechnology products and solutions often require ethical and regulatory clearance, making the process long, expensive and cumbersome.
- As the nature of the work in the biotechnology sector is specialised, most jobs are filled with experienced and skilled scientists leaving the demand for young and inexperienced ones low.
- In a global marketplace, having a large number of young professionals hungry to work at meagre wage coupled with the need of large corporations in the West to get work done cheaper created some of the large IT companies in India.
- Therefore, unlike the IT sector, the biotechnology sector requires years of experience in the domain, access to labs with sophisticated instruments, sustained and long-term funding to innovate.

The future of biotechnology is bright in India. However, the sector is not going to displace the IT sector anytime soon in employment generation

### Impediments in the Biotechnology Sector

- Modern biotechnological research is expensive. It requires a highly trained and skilled workforce and access to expensive instruments.
  - \* So far, most of the high-quality research output has come from a handful of institutions with better scientific infrastructure.

\* The rest, which forms the bulk of the research publications, is of mediocre quality. This is primarily due to a “publish or perish” culture that incentivises numbers over quality.

- Over the years, the focus of research has slowly shifted from fundamental to applied research. Why has India not produced another Jagadish Chandra Bose or G.N. Ramachandran despite the biotechnology research budget growing several folds? The fruits of applied research will only come when we start investing in basic research without asking for quick returns.
- Compared to the developed economies (the United States), biotechnology research in India is mainly funded by the public exchequer.
  - \* Unless the private sector starts supporting applied research and engages with academic institutions, the innovation in applied and translational biotechnology will be minimal.
  - \* While continuing and increasing the share of funding in basic research, the government should encourage and incentivise the private sector to invest substantially in applied research.

### Advantage China

- Unlike India, China has many more labs with the best of scientific infrastructure; each with more number of skilled human resources trained in regimental work culture and trained to practise rigorous documentation.
- Chinese students and scientists outnumber Indians nearly 5:1 in most American universities in the life sciences/biology-related disciplines.
- A booming economy and a higher science budget coupled with a flexible hiring system have made Chinese universities and research labs attract many overseas Chinese scientists.

### Initiatives taken by the Indian Government

The government has been supporting biotech entrepreneurs.

- Initiatives through the Biotechnology Industry Research Assistance Council (BIRAC) of the Department of Biotechnology to support the innovation ecosystems have resulted in an impressive outcome.
- For example, the funding has helped startup companies make nearly 50 biotechnology-related products that are in the market today.



Moving beyond this, however, will require a different strategy and understanding of the mature biotech-led innovation and economy ecosystems.

#### What can the Govt do going forward?

- Our government needs to make the process of hiring in our universities and national labs simpler and flexible, not necessarily provide more salary, to attract the bright overseas Indian scientists.
  - \* The government has been encouraging and promoting entrepreneurship, but the culture of institutions and scientists to be entrepreneurial will take time. This will require a flexible policy in the institutes to allow scientists incubate startup companies in their labs while retaining their positions
- Second, the government should let scientists from research institutions and universities take unpaid leave to join the industry for a fixed period.
  - \* Similarly, the government should relax rules to appoint researchers from industry in faculty positions with the freedom to teach, participate, and take students.
  - \* This academia-industry linkage will do the much-required communication and understanding of the problems at both ends.
  - \* Without a sustained effort in encouraging and promoting science-driven innovation in our academic institutions, and a robust academia-industry collaboration, biotechnology-led innovation will not aid the nation's economic growth.

#### Conclusion

- Discoveries in biotechnology may help us solve some of the pressing societal issues of our time: cleaning our rivers, producing life-saving drugs, feeding our growing population with nutritious food and helping us clean the air we breathe. Therefore, it will be a mistake to look at the biotechnology sector through the lens of employment generation only.
- The need for the use of artificial intelligence-based tools and applications of big data in biology will leverage India's strength in IT and move biotech innovations faster to the marketplace.
- Till then, India needs to do things patiently and work on the right side of the ethical and regulatory boundaries.

## **2. Can organoids, derived from stem cells, be used in disease treatments?**

#### Context

- At the Society for Neuroscience's 49th annual meeting, held in Chicago, U.S., two neuroscientists warned the gathering that fellow scientists are "perilously close" to crossing the ethical red line of growing mini-brains or organoids in the laboratory that can perceive or feel things.

#### What is a stem cell?

- Our body is made up of many different types of cell
  - \* Normal cells are differentiated cells which has definite shape and structure and has the ability to perform only the specific function in a particular place of the body.
- Stem cells are undifferentiated mass of cells which are obtained only from a multi-cellular organism and are capable of dividing enormously into different types of cells which performs different functions.
  - \* They are called as God cells or mother Cells

#### Stem cells originate from two main sources:

Embryos and Adult Body Cell.

Embryonic stem cells

- From the very earliest stage of pregnancy, after the sperm fertilizes the egg, an embryo forms.
- Around 3–5 days after a sperm fertilizes an egg, the embryo takes the form of a blastocyst or ball of cells.
- The blastocyst contains stem cells and will later implant in the womb. Embryonic stem cells come from a blastocyst that is 4–5 days old.
- When scientists take stem cells from embryos, these are usually extra that result from in vitro fertilization (IVF).
- These embryonic stem cells are pluripotent, meaning that they can turn into more than one type of cell.

Stem cells are present inside different types of tissue.

- the brain
- bone marrow
- skin

#### What is an organoid?

- Organoids are a group of cells grown in laboratories into three-dimensional, miniature structures that mimic the cell arrangement of a fully-grown organ.
- Organoids are grown in the lab using stem cells that can become any of the specialised cells seen in the human body, or stem cells taken from the organ or adults cells that have been induced to behave like stem cells, scientifically called induced Pluripotent Stem Cells (iPSC).
- They are tiny (typically the size of a pea) organ-like structures that do not achieve all the functional maturity of human organs but often resemble the early stages of a developing tissue.
  - \* Most organoids contain only a subset of all the cells seen in a real organ, but lack blood vessels to make them fully functional.

- In the case of brain organoids, scientists have been able to develop neurons and even make specific brain regions such as the cerebral cortex that closely resemble the human brain.
- The largest brain organoids that have been grown in the laboratory are about 4 mm in diameter.

#### **How are organoids grown in the laboratory?**

- Stem cells are provided with nutrients and other specific molecules to grow and become cells resembling a specific organ.
- The growing cells are capable of self-organising into cellular structures of a specific organ and can partly replicate complex functions of mature organs — physiological processes to regeneration and being in a diseased state.
- Organoids of the brain, small intestine, kidney, heart, stomach, eyes, liver, pancreas, prostate, salivary glands, and inner ear to name a few have already been developed in the laboratory.

#### **Examples**

- In some cases, scientists have already transplanted such lab-grown brain organoid to adult animals.
- The transplanted organoid had integrated with the animal brain, grown new neuronal connections and responded to light.
- Similarly, lung organoid transplanted into mice was able to form branching airways and early alveolar structures.

#### **Why are scientists exhilarated?**

- Researchers have been successful in generating organoids of increasing “complexity and diversity”. Since the organoids closely resemble mature tissues, it opens up new vistas.
- These include studying the complex arrangements of cells in three-dimension and their function in detail, and understanding how cells assemble into organs.

#### **Significance**

- Organoids can be used to study the safety and efficacy of new drugs and also test the response of tissues to existing medicines.
- Organoids will bring precision medicine closer to reality by developing patient-specific treatment strategies by studying which drugs the patient is most sensitive to.
- Organoids offer new opportunities to studying proteins and genes that are critical for the development of an organ. This helps in knowing how a mutation in a specific gene causes a disease or disorder.

- Since the use of animals during drug development studies is becoming increasingly difficult, the focus has been on refining, reducing and replacing them.
- Scientists are already using stem cells taken from tumours to grow organoids that are poised to develop cancer. They are also using healthy organoids to identify and verify the gene mutations that cause cancer.

#### **Ethical Issues**

- It's unclear whether or not to ask patients for consent specifically for their cells to be used for organoid growth in addition to other lab uses.
- Additionally, some researchers have raised questions about the sensory abilities of the organoids themselves.

### **3. Gagan Enabled Mariner's Instrument for Navigation and Information (GEMINI)**

#### **Context:**

- The Government launched the Gagan Enabled Mariner's Instrument for Navigation and Information (GEMINI) device, which is a low-cost device for ocean states forecast and mapping potential fishing zones.

#### **Limitations of the old system:**

- The new device will help in seamless and effective dissemination of emergency information and communication on disaster warnings, Potential Fishing Zones (PFZ) and Ocean States Forecasts (OSF) to fishermen.
- While PFZ Advisories provide information on the probable locations on fish aggregation in the seas, OSF provide the accurate state of the ocean.
- Though the advisories and forecasts are disseminated through multiple communication modes, none of them could provide such information, including the disaster warnings when the fishermen move away from the coast beyond 10-12 km.
- That remained a major limitation in disseminating the information to fishermen who go in the sea beyond 50 nautical miles; sometimes up to 300 nautical miles and beyond to conduct multiday fishing.
- This lacuna was severely felt during the Ockhi cyclone in 2017, when fishermen went out, for deep sea fishing before the onset of the cyclone and could not be informed about the developing cyclone.

#### **About GEMINI:**

- To overcome this difficulty, the Indian National Centre for Ocean Information Services (INCOIS), an autonomous body under the Ministry of Earth Sciences (MoES) joined hands with the Airports Authority of India (AAI) to utilize the GAGAN (GPS Aided Geo Augmented Navigation) satellite system to transmit the PFZ, OSF and disaster warnings to fishermen.

- To receive the messages transmitted through the GAGAN satellites, INCOIS together with AAI developed a low-cost GAGAN system-enabled GEMINI device.
- GEMINI was electronically designed and manufactured by a private player based in Bangalore under the Make in India Program.
- The GEMINI device receives and transfers the data received from GAGAN satellite/s to a mobile through Bluetooth communication.
- A mobile application developed by INCOIS decodes and displays the information in nine regional languages.

#### **4. LCROSS (Lunar CRater Observation and Sensing Satellite) mission**

- It is a robotic spacecraft operated by NASA.
- It was launched immediately after the discovery of lunar water by Chandrayaan-1.
- The LCROSS mission objective was to further explore the presence of water ice in a permanently shadowed crater near a lunar polar region.
- It was successful in confirming water in the southern lunar crater Cabeus.
- It was launched together with the Lunar Reconnaissance Orbiter (LRO) on June 18, 2009, as part of the shared Lunar Precursor Robotic Program, the first American mission to the Moon in over ten years.

#### **5. Spectroscopy**

##### **Context**

- The Indian Space Research Organisation (ISRO) released an image from Chandrayaan-2 showing measurements from the Moon, carried out by the instrument Imaging Infrared Spectrometer (IIRS).
- Such studies make up a branch of physics called spectroscopy.

##### **Details**

- It is well known how visible light can disperse into rainbow colours after passing through a prism.
- The science of spectroscopy grew from there, and today it has extended to include the study of interaction between matter and electromagnetic radiation.
- IIRS is designed to measure light from the lunar surface in narrow spectral channels (bands).
- It has the ability to split and disperse reflected sunlight (and its emitted component) into these spectral bands.

##### **Significance**

- From the reflected solar spectrum, scientists will look for signatures, including of minerals.
- This will help map the lunar surface composition, which in turn will help us understand the Moon's origin and evolution in a geologic context.

#### **6. SCISAT**

- It is a Canadian satellite designed to make observations of the Earth's atmosphere. Its main instruments are an optical Fourier transform infrared
- The SCISAT satellite was developed by the Canadian Space Agency to help scientists understand the depletion of the Earth's ozone layer by looking at particles in the atmosphere as sunlight passes through them.
- With its help, the study says, astronomers can tell what molecules are found in a planet's atmosphere by observing the changes in starlight as it shines through the atmosphere.

#### **7. Nobel Prize**

- Alfred Nobel, a Swedish chemist, engineer, industrialist, and the inventor of dynamite, in his last will and testament in 1895, gave the largest share of his fortune to a series of prizes in Physics, Chemistry, Physiology/Medicine, Literature, and Peace, to be called the "Nobel Prizes".
- In 1968, the sixth award, the Prize in Economic Sciences was started by Sweden's central bank, the Sveriges Riksbank.
- According to the official Nobel Prize website, between 1901 and 2018, the Prizes have been awarded 590 times, the recipients during this period being 908 Laureates and 27 organisations.
- The Nobel Prize consists of a Nobel Medal and Diploma, and a document confirming the prize amount

##### **The prize money**

- The awardees of the 2019 Nobel Prize will receive in prize money Swedish kronor (SEK) 9 million (approximately Rs 6.45 crore) for a full Prize.
- In his will, Alfred Nobel dedicated most of his fortune, SEK 31 million at that time, for the Awards. This money was to be converted into a fund and invested in "safe securities."
- The income from the investments was to be "distributed annually in the form of prizes to those who during the preceding year have conferred the greatest benefit to mankind".

## 8. Nobel Prize- Chemistry

### Context:

- Three scientists have won the Nobel Prize in Chemistry for their work developing lithium-ion batteries.

### Chemistry Nobel Prize:

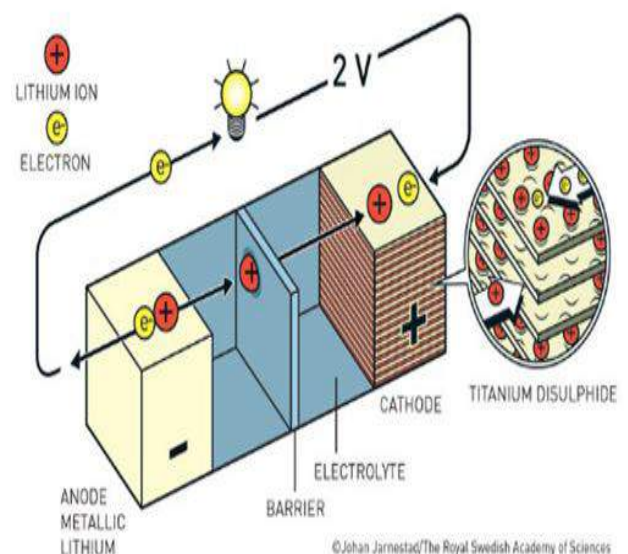
- The prize went to Stanley Whittingham, 77, a British-American chemistry professor at the State University of New York;
  - \* Whittingham developed the first functional lithium-ion battery in 1976.
- John B. Goodenough, 97, a German-born engineering professor at the University of Texas;
  - \* Goodenough brought in a major improvement in 1980.
- Japan's Akira Yoshino, 71, of Meijo University.
  - \* Yoshino made the first practical-use lithium-ion battery in 1985.
- Commercially manufactured lithium-ion batteries, based on what Yoshino had developed, made their first appearance in 1991.

### Details:

- The development of lithium-ion batteries have reshaped energy storage and transformed cars, mobile phones and many other devices and reduced the world's reliance on fossil fuels.
- Lithium-ion batteries are the first truly portable and rechargeable batteries.
- Whittingham harnessed the enormous tendency of lithium, the lightest metal, to give away its electrons to make a battery capable of generating over two volts.
  - \* The older rechargeable batteries used to have solid materials in the electrodes which used to react with the electrolyte and damage the battery.
  - \* Whittingham's innovation came from the fact that he used the atom-sized spaces within the cathode material, titanium disulphide, to store the positive lithium ions.
  - \* The choice of lithium was dictated by the fact that it let go of its electron quite easily and was also very light.
- Goodenough had doubled the capacity of the battery to four volts by using cobalt oxide in the cathode one of two electrodes, along with the anode, that make up the ends of a battery.

- \* Whittingham's battery worked at room temperature, making it practical, but was prone to short-circuits on repeated charging.
- \* An addition of aluminium, and a change of electrolyte, made it safer, but the big breakthrough was made by Goodenough who changed the cathode to a metal oxide instead of metal sulphide (titanium disulphide) that Whittingham had been using.
- \* Goodenough's battery was almost twice as powerful as Whittingham's.
- Yoshino substituted petroleum coke, a carbon material, in the battery's anode. This step paved the way for the first lightweight, safe, durable and rechargeable commercial batteries to be built.
  - \* Yoshino started working on Goodenough's battery and tried using various lighter carbon-based materials as the anode in order to bring down the weight further.
  - \* He got excellent results with petroleum coke, a byproduct of the oil industry.
  - \* This battery was stable, lightweight, and as powerful as Goodenough's.

### How batteries work?



- Batteries convert chemical energy into electricity.
- A battery comprises two electrodes, a positive cathode and a negative anode, which are separated by a liquid chemical, called electrolyte, which is capable of carrying charged particles.



- The two electrodes are connected through an electrical circuit.
- When the circuit is on, electrons travel from the negative anode towards the positive cathode, thus generating electric current, while positively charged ions move through the electrolyte.
- Single-use batteries stop working once a balance is established between the electrical charges.
- In rechargeable batteries, an external power supply reverses the flow of electric charges, so that the battery can be used again.
- Researchers have continued to look for other materials to make more efficient batteries, but so far none of these has succeeded in outperforming lithium-ion battery's high capacity and voltage.
- The lithium-ion battery itself has, however, gone through several modifications and improvements so that it is much more environment-friendly than when it was first developed.

## 9. Nobel Prize - Medicine

### Context

- The Nobel Prize for Physiology or Medicine was awarded to three scientists, William G. Kaelin Jr. from Howard Hughes Medical Institute, Maryland, U.S., Sir Peter J. Ratcliffe from Francis Crick Institute, London, and Gregg L. Semenza from the Johns Hopkins Institute for Cell Engineering for their discovery of how cells sense and adapt to oxygen availability.
- The three scientists have uncovered the genetic mechanisms that allow cells to respond to varying levels of oxygen.

### Why is it important?

- Oxygen is used by all cells to convert food to useful energy.
  - \* While oxygen is essential for the survival of cells, excess or too little oxygen can lead to adverse health consequences.
  - \* Oxygen supply temporarily reduces in muscles during intense exercise and under such conditions the cells adapt their metabolism to low oxygen levels. Proper growth of the foetus and placenta depends on the ability of the cells to sense oxygen.
- Drugs have already been developed to treat Anaemia by making the body produce increased number of red blood cells.
- Similarly, drugs to increase oxygen availability in people with heart disease and lung cancer are being tested.

- \* Many diseases can be treated by increasing the function of a particular pathway of the oxygen-sensing machinery.
- At the same time, inhibiting or blocking the pathway will have implications in treating cancer, heart attack, stroke and pulmonary hypertension.
- Cancers are known to hijack the oxygen-regulation machinery to stimulate blood vessel formation and also re-programme the metabolism in order to adapt to low oxygen conditions.
  - \* The reprogramming of metabolism gives cancer cells the plasticity to shift from a state where they have limited potential to cause cancer to a state when they have greater potential for long-term growth.
  - \* Efforts are under way to develop drugs that can block the oxygen-sensing machinery of cancer cells to kill them.

### What do we already know?

- The rate at which we respire depends on the amount of oxygen being carried in the blood.
- Specialised cells present next to large blood vessels in the neck sense the blood oxygen level and alert the brain to increase the rate of respiration when the oxygen level in the blood goes down.
- At the beginning of the last century, scientists knew that specialised cells present in the kidneys make and release a hormone called erythropoietin.
  - \* When oxygen level is low, as in high altitudes, more of this hormone is produced and released, leading to increased production of red blood cells in the bone marrow — helping the body adapt to high altitudes.
  - \* Besides increasing red blood cells, the body also grows new blood vessels to increase blood supply.

### What are the main contributions of 2019's winners?

- Both Prof. Semenza and Sir Ratcliffe independently studied how the erythropoietin gene is regulated by varying oxygen levels.
- Both researchers found that the oxygen-sensing mechanism is not restricted to kidneys where the erythropoietin is produced but by diverse cells in tissues other than the kidney.
- Prof. Semenza identified a pair of genes that express two proteins.
  - \* When the oxygen level is low, one of the proteins (HIF-1alpha) turns on certain genes, including the erythropoietin gene, to increase the production of erythropoietin.



- \* The hormone, in turn, increases the oxygen availability by boosting the production of red blood cells.
- Prof. Kaelin Jr., who was studying an inherited syndrome called von Hippel-Lindau's disease (VHL disease) found that people had increased risk of cancer when they inherited VHL mutations.
  - \* He found the VHL gene seemed to be involved in how cells respond to oxygen.

#### Function of the HIF-1alpha protein

- The function of the HIF-1alpha protein, which turns on the genes to produce more erythropoietin, is blocked and is rapidly degraded when the oxygen level is normal but remains intact when oxygen level is low.
- Sir Ratcliffe found that VHL interacts with the HIF-1alpha protein and degrades it when the oxygen level is normal.
- This ensures that excess red blood cells are not produced when the oxygen level is normal.

#### Why do athletes use erythropoietin? What are the risks?

- Athletes have been found to use erythropoietin, synthetic oxygen carriers and blood transfusions for blood doping. Each of the three substances or methods is banned by the World Anti-Doping Agency (WADA).
- While the use of erythropoietin in people who are anaemic due to chronic kidney disease helps in increasing the oxygen level in the blood, the use of the hormone by normal, healthy people can lead to serious health risks.
- In the case of healthy people who have a normal red blood cell count, the use of external erythropoietin is highly likely to make the blood thick (increase viscosity) leading to an increased risk of heart disease, stroke, and cerebral or pulmonary embolism (clot that blocks the flow of blood).

## **10. Nobel Prize- Physics**

#### Context

- The 2019 Nobel Prize in Physics was awarded to three scientists for their contribution to the understanding of the evolution of the universe.
- The award was shared between the three with one half going to James Peebles "for theoretical discoveries in physical cosmology" and the other half jointly to Michel Mayor and Didier Queloz "for the discovery of an exoplanet orbiting a solar-type star."

#### Details:

- James Peebles, a professor emeritus at Princeton University has won the Nobel Prize for his theories – "theoretical discoveries in physical cosmology" that have helped explain 13.8 billion years of cosmological history.

- Michel Mayor and Didier Queloz, have been honoured for the discovery of an exoplanet orbiting a solar-type star.
  - \* In 1995, they made the first discovery of a planet outside our solar system, an exoplanet, orbiting a solar-type star, 51 Pegasi.

#### How the universe evolved:

- Einstein had invented the idea, called the cosmological constant, to balance gravity and keep the universe static and unchanging.
- But astronomers established that the universe is actually expanding.
- Peebles utilized the cosmological constant, now known as dark energy, for a different reason: He aimed to show that the universe contained considerably less mass than was thought at the time.
- He found that the universe was not only expanding but also accelerating.
- His theoretical framework, developed over two decades, is believed to be the foundation of our modern understanding of the universe's history, from the Big Bang to the present day.
- Modern cosmology assumes that the universe formed as a result of the Big Bang.
- In decades of work since the 1960s, Peebles used theoretical physics and calculations to interpret what happened after.
- His work is focused largely on Cosmic Microwave Background (CMB) radiation, which is electromagnetic radiation left over from the early universe once it had cooled sufficiently following the Big Bang.
- Peebles and colleagues have correlated the temperature of this radiation with the amount of matter created in the Big Bang, which was a key step towards understanding how this matter would later form the galaxies and galaxy clusters.
- From their work, the universe is — just 5% known matter and the rest unknown, as dark matter (26%) and dark energy (69%).

#### **What are exoplanets? Since when have people been looking for them?**

- The word planet is a general term that describes any celestial body that moves around a star. Well, there are also "rogue" planets that do not orbit stars. An exoplanet is a planet outside our solar system. It is an extrasolar planet.
- Nicolaus Copernicus was the first to put the Sun at the centre, with planets like earth moving around it. This was literally an earth-shaking theory, because before that, people imagined the earth to be at the centre of the universe.

- The Copernican revolution was followed by the Italian philosopher Giordano Bruno in the sixteenth century and later Sir Isaac Newton shattering the uniqueness of the Sun's position by predicting that many stars could have planets orbiting them.

#### **Why did it take so long for exoplanets to be discovered?**

- 51 Pegasi b was the first exoplanet to be discovered by Mayor and Queloz in December, 1995.
- The delay was due to the lack of good telescopes or a suitable method.
- Indirect methods that used slight wobbling in the orbits of binary stars or variations in the brightness of isolated stars – none yielded correct results and was rejected by the astronomy community.

#### **What kind of a planet is 51 Pegasi b? Is it habitable?**

- The constellation Pegasus has a star 51 Pegasi which is some 50 light years away from earth. On October 6, 1995, the prize-winning duo discovered a planet orbiting it.
- It was named 51 Pegasi b, as per astronomical conventions. It is a gas giant, about half the size of Jupiter, which is why it was given the name Dimidium, meaning one-half. It orbits its star in just four days. It is unlikely that we can survive that.

#### **How many such exoplanets have been discovered? Who maintains a list of exoplanets?**

- According to the NASA exoplanet archive, as of October 10, 2019, there are 4,073 confirmed exoplanets. This webpage hosts one of the archives that has such lists and data.
- Today, there are not just ground-based telescopes but space missions that search for exoplanets, such as the Kepler Space Telescope.

#### **Why did James Peebles get the Prize?**

- In the beginning was the Big Bang, about 13.8 billion years ago. No one knows much about the earliest states of the universe, but theories hold that it was a compact, hot and opaque particle soup.
- About 400,000 years after the Big Bang, the universe expanded and cooled to a few thousand degrees Celsius. This caused it to become transparent, allowing light to pass through it. This ancient afterglow of the Big Bang, the remnants of which still can be observed, is known as the Cosmic Microwave Background (CMB).
  - \* The universe continued to expand and cool and its present temperature is close to 2 kelvin. That is, approximately minus 271 degrees Celsius.

- \* Microwaves have wavelengths in the range of millimetres which has been long compared to visible light. The CMB consists of light in the microwave range because the expansion of the universe stretched the light so much. Microwave radiation is invisible light.

- \* The CMB was detected first in 1964, winning for its discoverers a Nobel Prize in 1978.

- Peebles realised that measuring the CMB's temperature could provide information about how much matter had been created in the Big Bang.

- \* He also saw that the release of this light played a role in how matter could form clumps creating what we now see as galaxies. This was a major breakthrough.

- \* This discovery by Peebles heralded a new era of cosmology.

- \* Many questions — how old is the universe? What is its fate? How much matter and energy does it contain? These could be answered by studying the variation of the CMB.

#### **What is Peebles' role in understanding dark matter? For that matter, what is 'dark' matter?**

- By measuring the speeds of rotating galaxies, scientists were able to see that a lot of mass needed to be there that would hold the galaxies together with the strength of their gravitational attraction. Before Peebles intervened, the missing mass was attributed to neutrinos.
- Peebles instead said this is due to a hitherto unknown type of "dark" matter particles. However, while they could "see" a portion of this mass, a large part of it could not be seen. Hence the mass missing from view was named "dark" matter

#### **What is dark energy?**

- In 1998, it was discovered that the universe is expanding and that this expansion was gaining speed or accelerating.
- There had to be an "invisible" energy that was driving this. Calculations showed that this dark energy – so called because it did not interact with the observed mass – makes up about 70% of the universe.

### **11. Global Bio-India 2019**

- It is a mega international congregation of biotechnology stakeholders.
- The purpose of the summit is to attract investments, showcase the country's indigenous strengths and aspirations in the domain of biotechnology.

- It is being conducted by the Department of Biotechnology (DBT, Ministry of Science & Technology, GOI) and BIRAC.
  - \* Biotechnology Industry Research Assistance Council (BIRAC) is a not-for-profit enterprise set up by the DBT as an interface agency to strengthen and empower the emerging Biotech enterprise to undertake strategic research and innovation, addressing nationally relevant product development needs.

# SECURITY AND DEFENCE

## 1. Air Force Day

- 8th October is observed as 'Air Force Day' every year to mark the day when the air arm of the Indian armed forces came into being in the year 1932.
- This year marked the 87th Indian Air Force Day.
- It was established as an auxiliary air force of the Royal Air Force of Britain. After India became a Republic in 1950, the name Royal Indian Air Force was changed to Indian Air Force.

### Context:

- The Prime Minister extended his Air Force Day greetings to air warriors and their families on the occasion of Air Force Day.

## 2. Army Battle Casualties Welfare Fund (ABCWF)

- The ABCWF has been set up under Department of Ex-Servicemen Welfare (ESW), Ministry of Defence
- The ABCWF was instituted in July 2017 and was implemented retrospectively with effect from April 2016.
- The fund was created under the Charitable Endowments Act, 1890.
- This fund is in addition to the various schemes for the welfare of NoK (next of kin) and children of battle casualties in the form of additional ex-gratia.
  - \* In addition to the above assistance, the existing monetary grant includes ex-gratia (central) for various ranks ranging from ₹25 lakh to ₹45 lakh and Army group insurance, ranging from ₹40 lakh to ₹75 lakh.
- The ABCWF has been set up after a large number of people offered to provide monetary assistance to the families of battle casualties following an incident in February 2016 at Siachen where 10 soldiers lost their lives in an avalanche.

### Context:

- Heeding to a long-standing demand of the Army, Defence Minister Rajnath Singh has given in-principle approval to enhance monetary assistance to the next kin of battle casualties from existing Rs. 2 lakh to Rs. 8 lakh

### Details

- At present, financial assistance of Rs. 2 lakh was given to battle casualties in case of death and also to those sustaining 60 per cent and above disability besides to several other categories.

- The assistance is given in addition to liberalised family pension, financial assistance from Army group insurance, Army Welfare Fund and ex-gratia amount.

## 3. Goa Maritime Conclave (GMC)

### Context:

- The Navy hosted the second edition of GMC attended by 10 Indian Ocean littoral states and observers from a few friendly foreign countries.

### Details

- It was set up in 2017 to identify common threats in the Indian Ocean region and evolve cooperative mechanisms to tackle them.
- The theme for the conclave is "Common Maritime Priorities in IOR and need for Regional Maritime Strategy".
- The conclave focused on capacity building among IOR Navies to tackle emerging maritime threats, in addition to discussing cooperative strategies for enhancing interoperability among partner maritime agencies.
- Intelligence sharing concerning terrorism, drugs and trafficking are some of the areas where there is mutual cooperation

## 4. M982 Excalibur precision-guided artillery shells

### Context:

- The Indian Army (IA) has started the process of procuring an initial 1,200 Raytheon Missile developed M982 Excalibur precision-guided artillery shells from the US.

### Details

- These 155mm/52-cal shells will be used by the Indian Army's M-777 field howitzers and the K-9 Vajra self-propelled howitzers.
- The ammunition gives the artillery guns extended range and the ability to hit targets with very high accuracy
- The Excalibur projectile is developed by Raytheon and BAE Systems Bofors.

## 5. Rafale

### Context

- In October 2019, the first Rafale fighter aircraft for the Indian Air Force (IAF) was handed over to Defence Minister Rajnath Singh in France.

- This milestone is the latest in a series of much-needed yet perennially delayed steps to bolster the IAF's combat capabilities.

#### **What was the need of Rafale for India?**

- The IAF has historically been one of the best-equipped forces in the region, but has seen its advantage, particularly quantitative, against China and Pakistan narrow dramatically over the past two-odd decades.
- The IAF is today faced with the twin tasks of having to acquire technological superiority over its two adversaries, as well as mustering enough aircraft to head off any collusive misadventures.
- So to withstand the pressure from Pakistan and China in case of breakout of war and to increase the number of Jets in operation this was a necessity
- *se* is a French word meaning "gust of wind" and is a French-origin Delta winged, twin-engine multirole fighter aircraft manufactured and designed by Dassault Aviation.
- Rafale is a Medium Multi-Role Combat Aircraft (MMRCA) that is said to boost India's air dominance exponentially, currently safeguarded by fighter jets like Russia made Sukhoi Su-30MKI and MiG 29, along with French Mirage-2000 and indigenously built HAL Tejas
- The initial bidders were Lockheed Martin's F-16s, Boeing's F/A-18s, Eurofighter Typhoon, Russia's MiG-35, Sweden's Saab's Gripen and Dassault's Rafale.
- All aircraft were tested by the IAF and after careful analysis on the bids, two of them — Eurofighter and Rafale — were shortlisted.
- Dassault bagged the contract to provide 126 fighter jets as it was the lowest bidder and the aircraft was said to be easy to maintain. After Rafale won the contract, the Indian side and Dassault started negotiations in 2012.

#### **Specifications**

- The Rafale is a modern fighter jet known for its agility, speed, weapon holding capacity and attack capability. The Dassault Rafale has a delta wing design and is capable of g-forces as high as 11g (in case of emergency). The Rafale is available in both single and dual seating cabin (India ordered 28 single and 8 dual seater Rafale).
- The Rafale is powered by two SNECMA M88 engines, each capable of providing up to 50 kilonewtons (11,000 pounds-force) of dry thrust and 75 kN (17,000 pounds-force) with afterburners. The engines push the Rafale to attain a high speed of 1.8 Mach (1912 kmph) and a range of more than 3700 km with 3 drop tanks.
- Dassault has also loaded the Rafale with a Martin-Baker Mark 16F "zero-zero" ejection seat, capable of operation at zero speed and zero altitude.

- In terms of weapons, the Rafale can be equipped with air-to-air missiles, air-to-ground missiles, and air-to-surface missiles along with Nuclear weapons. For avionics, the Rafale is also equipped with AESA radar, SPECTRA Electronic Warfare System andIRST System.
- The Rafale jets will come with various India-specific modifications, including Israeli helmet-mounted displays, radar warning receivers, low band jammers, 10-hour flight data recording, infra-red search and tracking systems among others.
- The Indian government is paying top dollar to Dassault to not only modify and certify the aircraft to an exacting specification but also to stand by its reliability in service — something that has never been done with a fighter aircraft in Indian service to date.

#### **Countries that are operating Rafale**

- The French Air Force first operational Rafale squadron, EC 1/7 "Provence", was stationed at Saint-Dizier airbase in 2006.
- Along with the French Military including Air Force and Navy, countries like Egypt and Qatar are the current operators of the Rafale MMRCA

#### **Where will they be deployed?**

- The aircraft is capable of carrying a range of potent weapons and missiles and the first squadron of the aircraft will be positioned at Ambala air force station, considered one of the most strategically located bases of the IAF. The Indo-Pak border is around 220 km from there.
- The second squadron of Rafale will be stationed at Hasimara base in West Bengal.

#### **Key Challenges**

- Unfortunately, air power is an expensive business, and in a scenario where manpower and running costs consume the lion's share of the budget, the principal impediment to a comprehensive renewal of the IAF is a financial one.
- As such, lower capital costs and lower sustainment costs have to go hand in hand — it is simply not enough to argue that expensive western aircraft make up for their high upfront costs over lifetime sustainment.
- Enter the indigenous option — HAL's Tejas Light Combat Aircraft. Domestically produced and paid for mostly in rupees, it is not only fiscally attractive but also certainly good enough to replace the IAF's ageing MiG-21 and MiG-27 fleet as it stands.
  - \* However, non-compliance with a 1980s Air Staff Requirement and low production rates continue to raise questions about the type's future.
  - \* As reported by the Comptroller and Auditor General of India in May 2015, the Tejas Mark-I has over 53 shortfalls that reduce its operational capability.



- \* Tejas failed to meet operational requirements in various areas including the power to weight ratio, sustained turning rate, maximum speeds at low altitudes, AoA range, and weapon delivery profiles.
- Notwithstanding these concerns, the IAF has committed to a large number of an upgraded evolution of the type incorporating a range of modern improvements such as an active array radar as well as fixes to problems identified early on, such as lack of a self-protection jammer.
- \* If this variant can be delivered cheaply and quickly, it will arrest the dramatic hollowing out of the IAF that is anticipated to take place around 2024-25, by which time some 100 aircraft could be withdrawn from service.

### **Budgetary support**

- In the middle of the French import and the domestic LCA sits a fledgling tender for a third type of fighter — a foreign design to be made in India under the controversial Chapter 7 of the 2016 Defence Procurement Procedure (DPP).
- Where the budgetary support for a programme of 114 modern fighters, and indeed the ability of the country to establish and sustain two fighter manufacturers, will come from is not clear.
- Defence budgets have remained effectively flat for a long time, and with the economy flagging, an increase in capital outlay is not likely.
- Procurement funding will also necessarily have to compete with funding for research and development for upcoming domestic projects such as the redesigned LCA Mk.2 and fifth-generation Advanced Medium Combat Aircraft (AMCA).
- Finally, even if all near-term procurements proceed to plan, there is still a 'ramp up' period to contend with — the training of air and ground crew, building of infrastructure and actually operationalising new types will pose their own challenges that will slow the effective rate of force accretion.

### **In the neighbourhood**

Meanwhile, the Pakistan Air Force (PAF) and China's People's Liberation Army Air Force (PLAAF) are not standing still.

- The PAF is saddled with a number of legacy issues that are similar to the IAF. However, with the Sino-Pak JF-17 available cheaply and in numbers, along with access to a wide range of Chinese weaponry developed for the type, Pakistan is well placed to recapitalise a significant proportion of its air force with a relatively modern aircraft.
- \* Development and production of the JF-17 can be extended to replace the PAF's Mirage fleet at short notice as well, if so required. And as China ramps up its fifth-generation aircraft programmes and unit costs drop, there is little doubt these platforms will also find their way to Pakistan.

- The PLAAF's growth has been well documented. And in addition to a fourth and fifth generation re-equipment programme, the service benefits from a large number of force multipliers, including tankers, surveillance and control aircraft, and long-range bombers.
- \* While primarily oriented toward taking on the U.S. military in the Pacific and beyond, China's formidable aerial arsenal cannot be ignored in New Delhi.

### **Conclusion**

- So as the IAF gets ready to welcome its new acquisitions, it should be clear about the challenges it faces at a time when India's strategic and operational environment is undergoing a dramatic transformation.
- Ad hocism should give way to strategic thinking if these challenges are to be effectively met.

## **6. Reang Tribe (Bru in Mizoram)**

### **About the Tribe**

- Bru or Reang is a community indigenous to Northeast India, living mostly in Tripura, Mizoram and Assam.
- In Tripura, they are recognised as a Particularly Vulnerable Tribal Group.
- They speak the Reang dialect of Kokborok language which is of Tibeto-Burmese origin and is locally referred to as Kau Bru.
- Bru are the second most populous tribe of Tripura after the Tripuris
- In Mizoram, they have been targeted by groups that do not consider them indigenous to the state.

### **Customs and Practices**

- The majority of the Reang belong to the Vaishnav school of Hinduism and claim Kshatriya status.
- Dance is an integral part of Reang life. The Hojagiri folk dance of Reang sub tribe is well known
- 'Buisu', not 'bihu' is the most popular festival of Reang tribes

### **Background**

The Bru community, once spread across Mamith and Kolasib districts of Mizoram, were forced to flee their native land in 1997 after animosity between the tribe and the Mizos turned violent.

- In 1995, following a clash between Mizos and Brus, the Young Mizo Association and Mizo Students' Association demanded that Brus be removed from the state's electoral rolls, contending that the tribe was not indigenous to Mizoram. This led to an armed movement led by the militant outfit Bru National Liberation Front (BNLF), and a political one by the Bru National Union (BNU).
- In October 1997, BNLF militants killed a forest official in Mizoram, leading to retaliatory ethnic violence.

- The violent backlash from Mizos to this incident forced Brus to flee to Tripura where they have been living in refugee camps in pitiable condition for close to two decades.

**When did the repatriation process of the displaced tribals begin?**

- For years, Tripura pushed Mizoram to resettle the displaced tribals. The repatriation process began in 2010, and has been monitored and financed by the union Home Ministry.
- Displaced Bru families willing to return have been identified and, after verified as having lived in Mizoram before 1997, handed rehabilitation packages, and resettled in the villages they had left.
- The process was stalled in 2011, 2012 and 2015 amid protests by Mizo NGOs.
- The Ministry of Home Affairs brought the stakeholders to the talks in 2015, and a financial package of was arrived at.

**Challenges in addressing their issue**

- For a long time, helping the tribe return from relief camps to Manipur has been a task for the state government as well as the Centre.
- Brus began demanding relief on a par with that of Kashmiri Pandit and Sri Lankan Tamil refugees.

- While a few families have accepted the package offered by the Centre and returned, but most of the internally displaced refugees have refused to budge unless they get a better deal.
- In the latest effort to repatriate the refugees, the authorities could manage to send only 40 families to Mizoram after the refugee leaders refused to return citing mainly security reasons in their home State.

**7. Red notice**

- A Red Notice is a request to law enforcement worldwide to locate and provisionally arrest a person pending extradition, surrender, or similar legal action.
- It contains two main types of information:
  - \* Information to identify the wanted person, such as their name, date of birth, nationality, hair and eye colour, photographs and fingerprints if available.
  - \* Information related to the crime they are wanted for, which can typically be murder, rape, child abuse or armed robbery.
- Red Notices are published by INTERPOL at the request of a member country, and must comply with INTERPOL's Constitution and Rules.
- A Red Notice is not an international arrest warrant.

**INTERPOL Notices:**

## **8. Odisha camps to connect with tribals in Maoist-hit area**

### **Context:**

- The government of Odisha has started to reach out to tribals living in the Maoist-hit 'Swabhiman Anchal' in Odisha to include them in the government's developmental schemes.

### **Details:**

- 'Jan Sampark Sibir' has been organised by the administration.
- All major departments of the State government open their counters at these camps to include all residents — especially those left out in the developmental schemes.
- These camps also provide free medical facility, Aadhaar card, ration card, construction worker identity card making facilities.
- Horticulture and agriculture departments and banks counsel and provide financial support at these camps.
- A series of 'Jan Sampark Sibir' is thought to be an attempt to counter the Maoist propaganda.

### **Swabhiman Anchal:**

- Swabhiman Anchal is the tribal-dominated in Malkangiri district which was previously known as 'Bichhinnanchal' or cut-off area.
- The area remained encircled by water on three sides after the construction of reservoirs at Machhkund in the 1960s and Balimela in the 1980s. There was no means of communication to the villages other than boat services.
- The erstwhile cut-off region in Malkangiri is now connected with Gurupriya bridge.
- In the past, the inhabitants of 'Swabhiman Anchal' had protested against the lack of development in the region.
- It was alleged that in the past, Maoists were trying to use these issues to create a support base in the region.

## **9. Danx-19**

- It was a large-scale joint service exercise carried out for a period of five days.
- The Indian Army, the Indian Navy, the Indian Air Force and the Coast Guard take part in it.
- It is conducted by the Andaman and Nicobar Command (ANC).
- In addition to internal forces from ANC, accretional forces from the mainland comprising ships and aircraft, Special Forces from the newly formed Armed Forces Special Operations Division (AFSOD), also participated in this edition.

## **About the Andaman and Nicobar Command (ANC):**

- The ANC is the first and only tri-service theatre command of the Indian Armed Forces.
- It is based in Port Blair.
- It was created in 2001 to safeguard India's strategic interests in Southeast Asia and the Strait of Malacca by increasing rapid deployment of military assets in the region.
- It provides logistical and administrative support to naval ships which are sent on deployment to East Asia and the Pacific Ocean.
- Its components include the Army, the Navy, the Air Force and the Coast Guard.
- It is headed by an officer called the Commander-in-Chief of the ANC.
- It patrols India's Exclusive Economic Zone to suppress gun running, narcotics smuggling, piracy, and poaching, and conducts maritime surveillance, humanitarian assistance and disaster relief (HADR).

### **Context:**

- 'Defence of Andaman and Nicobar Islands exercise 2019 (Danx-19) was conducted in October 2019.

## **10. DEFCOM 2019**

- DEFCOM is a seminar jointly organized by the Corps of Signals and Confederation of Indian Industry (CII).
- It has evolved over the years to become a landmark conference for collaboration between the Indian armed forces, academia, research and development organizations, and the Industry on aspects pertaining to Information and Communications Technology.
- The theme for DEFCOM 2019 is "Communications as a Decisive Catalyst for Jointness".

### **Significance**

- DEFCOM over the years in promoting collaboration between the Armed forces and the Industry in Information and Communications Technology domain

## **11. DTrack**

- DTrack, as flagged by cyber-security firm Kaspersky, is used by hackers to attack financial and research centres in India.
- Its earlier version ATMDtrack was designed to hack ATMs in India.
  - \* The malware was designed to be planted on the victim's ATMs, where it could read and store the data of cards that were inserted into the machines

### **What does DTrack do?**

There are at least 180 versions of DTrack virus identified by Kaspersky Lab. Samples analyzed by Kaspersky Lab include the following capabilities:

- Keylogging
- Retrieving browser history
- Gathering host IP addresses, information about available networks and active connections
- Listing all running processes
- Listing all files on all available disk volumes

#### **Steps companies can take to avoid malware attack:**

- Tighten their network and password policies
- Use traffic monitoring software
- Use antivirus solutions

#### **Context**

- According to the reports coming from various sources, it has been revealed that ISRO's famous mission Chandrayaan 2 (Mission Moon) was targeted by the North Korean hackers.
- The reports also suggest that the hacks were conducted using DTrack malware which is linked to a group of hackers controlled by the North Korean government.

### **12. Ghostcat Malware**

- The malware's goal is to hijack users' mobile browsing sessions.
- The 'infection' begins when a user visits a particular website and is served a malicious advertisement.
- Ghostcat fingerprints the browser to collect device information and eventually leads the user to malicious content.

### **13. Nagaland Peace Accord**

#### **History of the dispute**

- The Naga Hills became part of British India in 1881. The effort to bring scattered Naga tribes together resulted in the formation of the Naga Club in 1918
- From 1918 the Naga movement has been asserting a distinct ethnic identity and demanding an independent homeland. In 1929, the Club submitted a memorandum to the Simon Commission in which it emphasised that Nagas and Indians are separate with no common history and hence Nagas should be given independent status.
- The club metamorphosed into the Naga National Council (NNC) in 1946.
- Under the leadership of Angami Zapu Phizo, the NNC declared Nagaland as an independent State on August 14, 1947, and conducted a "referendum" in May 1951 to claim that 99.9% of the Nagas supported a "sovereign Nagaland".

#### **Rise of armed Struggle**

- In 1952, Phizo formed the underground Naga Federal Government (NFG) and the Naga Federal Army.

- The government of India sent in the Army to crush the insurgency and, in 1958, enacted the Armed Forces (Special Powers) Act.
- The insurrection petered out by the mid-1970s but returned with more intensity in the form of the NSCN led by Mr. Muivah and S.S. Khaplang.

#### **Peace Process**

- The First Peace Process started before India's independence. In June 1947, Assam Governor Sir Akbar Hydari signed the Nine-Point Agreement with the moderates in the NNC but Phizo rejected it outright.
- A 16-point Agreement followed in 1960 leading to the creation of Nagaland on December 1, 1963.
- In this case too, the agreement was with the Naga People's Convention that moderate Nagas formed in August 1957 during a violent phase and not with the NNC.
- In 1964, a Peace Mission was formed for an agreement on suspension of operations with the NNC, but it was abandoned in 1967 after six rounds of talks.
- The Shillong Accord of 1975, followed, under which a section of NNC and NFG agreed to give up arms.

#### **When did the NSCN come into being?**

- In 1975, the Shillong Accord was signed in which the NNC agreed to give up arms and accept the Indian Constitution.
- Muivah and Swu, who were then NNC members, revolted by terming the Accord as a 'sell out' on the Naga sovereignty demand and went on to form the National Socialist Council of Nagaland (NSCN) in 1980 with S. S. Khaplang.
  - \* Muivah also had Isak Chisi Swu and S S Khaplang with him.
- The first major split in the NSCN occurred in 1988 when it was divided into two factions, one led by Isak Swu and Muivah (IM), and the other led by Khaplang.
  - \* It is to be noted that while Muivah is a Tangkhul Naga from Manipur
  - \* Swu is a Sema Naga from Nagaland.
  - \* Khaplang, a Hemis Naga, hails from Upper Myanmar.
- While the NNC began to fade away, and Phizo died in London in 1991, the NSCN (IM) came to be seen as the "mother of all insurgencies" in the region.

#### **What did the NSCN (IM) want?**

- A "Greater Nagalim" comprising "all contiguous Naga-inhabited areas", along with Nagaland.
- That included several districts of Assam, Arunachal and Manipur, as also a large tract of Myanmar.

- The map of “Greater Nagalim” has about 1,20,000 sq km, while the state of Nagaland consists of 16,527 sq km.

#### **When did NSCN (IM) join peace talks?**

- Muivah, Swu and other top NSCN (IM) leaders escaped to Thailand in the early 1990s.
- While Nagaland Governor M M Thomas extracted the first positive response from the NSCN (IM), Prime Minister P V Narasimha Rao met Muivah, Swu and others in Paris in 1995.
- The Government of India signed a ceasefire agreement with NSCN (IM) on July 25, 1997, which came into effect on August 1, 1997. Over 80 rounds of talks between the two sides were held subsequently.

#### **Naga Peace Talks**

- The Naga peace talks refer to talks undertaken between the Indian government and the various stakeholders in Nagaland to resolve decades-old disputes.
- The Naga Peace Accord, a framework agreement (2015) as it has been termed, signed between the National Socialist Council of Nagalim-Isak-Muivah (NSCN-IM) and the Government of India.
  - \* Realising that the NSCN (IM) cannot be the sole representative of the Nagas, in 2017 other Naga underground factions were also brought to the negotiating table, lowering the prestige of the NSCN (IM).
  - \* Today there are seven of these factions under an umbrella organisation, the Naga National Political Groups (NNPG), taking part in the parleys, and they are willing to sign a peace pact under the Constitution, leaving other demands to be pursued later.
- It has its significance:
  - \* Firstly, it shows the flexibility and realism of the NSCN (IM) in terms of the willingness to alter goals, from complete sovereignty and Greater Nagalim to acceptance of the constitutional framework albeit with a provision for the grant of greater autonomy to Naga inhabited areas outside of Nagaland through the establishment of autonomous district councils
  - \* Second, the signing of the accord discloses that the platform of social support for the NSCN (IM) comprising of Naga civil society groups are insistent on a peaceful path to conflict resolution
  - \* Third it pledges to preserve the culture, history and traditions of the Nagas and grants greater autonomy to Naga inhabited areas outside of Nagaland.

#### **Concerns**

- There are still outfits like Naga National Council (NNC) led by daughter of AZ Phizo – one of the founding members of NNC, NNC Thinoselie Keyho, NNC (V Nagi), and the Myanmar-based NSCN (Khaplang) which are not part of the current peace process.
- Arunachal Pradesh, Assam and Manipur are wary of the NSCN-IM's concept of Nagalim or Greater Nagaland that could lead to a redrawing of their boundaries.

#### **Present Status**

- Centre's interlocutor and Governor of Nagaland RN Ravi, who has been handling the Naga peace process for long, says that the procrastinating attitude of the NSCN-IM is simply delaying the inking of the deal.
- It is because the organisation is now insisting on a separate flag and a constitution for Nagaland.
- NSCN (IM) intends to have a framework where India and Nagaland would be independent allies in a shared-sovereignty federal relationship.
- The Indian government is not ready to accept these demands though is willing to allow for regional autonomy within the framework of the Indian constitution.
- The talks hit a roadblock after the Centre rejected the NSCN(IM)'s demand for a separate flag and constitution.

#### **Changed Demands:**

- The willingness of the NNPG, most of whose leaders are Nagaland based, to keep in abeyance demands such as a Greater Nagaland, in exchange for enhanced autonomy is a strong indication of the shift in demands.
- A Nagaland-centred truce looks the most possible solution to the issue.

#### **Changed political scenario:**

- Other issues are taking centre stage in Nagaland Politics. There has also been a growing social movement in Nagaland for the consolidation of Nagaland's own people.
- The demand for a Register of Indigenous Inhabitants of Nagaland, and now the formation of the Nagaland Indigenous People's Forum on October 28 are some of these

#### **Way forward:**

- The NSCN (IM) must realize and accept the changed scenarios and work towards a lasting solution to the Naga issue.
- To find a solution to the decades-old Naga issue is in the interest of both the Nagas as well as the Centre. It will help India address a decades-old security issue on the one hand while it will bring in much-needed growth in the region.



- The geopolitical situation demands the Nagas to be pragmatic and realistic in their negotiations with the Government of India. There is scope for regional autonomy as per the Indian constitution. The peace accord must safeguard the Naga's right to self-determination.
- The unresolved contentious issues must be pursued earnestly post a peace settlement, politically and democratically.

#### **14. Open General Export Licences (OGEL)**

##### **Context:**

- The Defence Minister approves two Open General Export Licences (OGEL) in a major push for defence exports.

##### **Details:**

- The OGEL is a one-time export licence to be granted to a company for a specific period (two years initially).
- The current OGEL have been approved for the export of certain parts and components and intra-company transfer of technology to select countries.
- It is expected to give a boost to defence exports and enhance ease of doing business.
- The application for grant of OGEL will be considered by the Department of Defence Production (DPP) on a case-to-case basis.
- The countries allowed under the OGELs are: Belgium, France, Germany, Japan, South Africa, Spain, Sweden, UK, USA, Canada, Italy, Poland and Mexico.
- For acquiring the licences, the applicant is mandatory to have Import-Export certificate. The quarterly & end of the year reports on all the transactions done under OGELs should be submitted to DPP for examination and post-export verification.
- The items permitted under OGEL include components of ammunition & fuse setting device without energetic and explosive material; firing control & related alerting and warning equipment & related system; and body protective items.
- Complete aircraft or complete Unmanned Aerial Vehicles (UAVs) and any components specially designed or modified for UAVs are excluded under this licence.
- The transfer of technology to the countries is subject to the condition that the export is an intra-company transfer from an Indian subsidiary (applicant exporter) to its foreign parent company and/or to subsidiaries of the foreign parent company.

#### **15. Escaping the honey trap**

##### **Context:**

- The Sejal Honey trap case resulting in the compromising of classified details of the BrahMos missile programme has brought to light the urgent need to address the security challenge of digital honey trapping.

##### **Meaning of honey trap:**

- Honey trapping is an investigative practice involving the use of romantic or sexual relationships for interpersonal, political (including state espionage), or monetary purpose.
- The honey pot or trap involves making contact with an individual who has information or resources required by a group or individual, the trapper will then seek to entice the target into a false relationship (which may or may not include actual physical involvement) in which they can glean information or influence over the target.

##### **Examples:**

- The recent 'Sejal' case in India
- Two cases of honey-trapping were reported in the Indian army in 2015 and another two in 2017. The Indian Air Force has reported one case in 2015.
- Use of 'sexpionage' by Chinese intelligence to target British banks and businesses.

##### **Background:**

- In the world of intelligence, information is the principal currency and to extract vital information regarding enemy's security structure honey traps have been the preferred choice.
- The modus operandi involves befriending the targets on social media and later looking to extract valuable information through blackmail using incriminating photos.
- The Honey trapping has turned digital with increased access to social media platforms. This allows anonymity for the perpetrators. Compared to traditional methods of honey trapping, these are swift, clean, and without any physical risk to the enemy and also scalable meaning that multiple targets can be lured simultaneously.
- Unlike conventional warfare, the cost and barrier to entry into enemy territory has gone down drastically.
- The Sejal case also led to two viruses, Whisper and GravityRAT, being used to infect the Indian computer network.
- The Army has described honey-trap cases as a weapon of hybrid warfare being waged by the enemy across the borders.

**Counter Measure taken:**

- The military intelligence is carrying out selective checks on phones, laptops and desktops of officers and soldiers in sensitive areas.
- Army Chief General Bipin Rawat has cracked the whip on social media usage. A list of dos and don'ts have been prepared for the personnel.
- An information warfare team is being set up at the Army headquarters. Suspected Twitter handles and Facebook accounts have also been identified and have been reported to the social media intermediaries for action.

**Further measures needed:**

- Investing in the latest technologies for early and better detection of viruses.
- Conducting frequent workshops to sensitize defence personnel against cyber risks.

- Best cyber practices must be built amongst fresh recruits.
- Conducting timely reviews and audits of all devices
- Developing a methodology to embed dormant malware in all sensitive data and devices which will be able to track the bad actors and destroy the documents with a programmed kill switch.
- Developing a doctrine to hit back. The Defence Cyber Agency should be leveraged towards this end.

**Conclusion:**

- In this information age where every keyboard is practically a weapon, the enemy will be relentless and continue to invest and recruit heavily in faceless digital honey trapping. India needs to act fast to deter such threats.

# ENVIRONMENT AND ECOLOGY

## 1. Aarey Milk Colony tree-felling case

### Context:

- The Aarey Milk Colony, an erstwhile Government Dairy Farm, sprawls over 1,300 hectares in the Mumbai's suburbs and is Mumbai's second-largest green cover after the Sanjay Gandhi National Park
- Now the Mumbai Metro Rail Corporation Ltd. (MMRCL) has earmarked 33 hectares, around 2.3 percent of the Aarey Colony land for the car shed which will require cutting of over 2,700 trees, as per the government.

### State's View

- The government claims that Aarey is not a notified forest and hence the land can be used by the government for the metro project
- The state estimates that over 7.5 million people travel in Mumbai's suburban trains daily and the upcoming metro will serve as many passengers as suburban rails by 2034 easing the pressure off from the world's most congested railways.
- The MMRCL claims significant afforestation has already been done in compensation for the trees cut



### What kind of facility is proposed to be built at the Aarey site?

- The proposed car shed will house washing, maintenance, and repair works facilities.
- A railway car shed is a "Red Category" industry, which causes the highest level of pollution.

### What do the environmentalists say?

- The site is on the bank of the Mithi River, with several channels and tributaries flowing into it — and construction could flood Mumbai
  - \* Mumbai had seen a deluge in 2005 with massive destruction. Aarey's further destruction may lead to more such episodes
- The activities at the shed will generate oil, grease, and electrical waste, besides hazardous materials such as acid and paints.
  - \* Effluents will be discharged into the Mithi, and could pollute the groundwater.
  - \* Also, construction of the depot will increase exploitation of ground water resources
- Aarey's trees, grassland, bushes and marshes are also home to leopards, migratory birds, snakes, scorpions, spiders, butterflies and more species.
- Aarey is home to over 3,500 families of Warli adivasis and other tribal groups spread over 27 hamlets. Many of them face displacement now.
- Activists argue that Aarey is an extension of Sanjay Gandhi National Park, and that the car shed would pave the way for greater commercial exploitation of the area.

### Are there any alternatives?

- As an alternative, the Aarey Conservation Group had suggested Kanjurmarg, 7.5 kilometres to the east of the current site, and six other locations.
- A technical committee, constituted by the state in 2015 to assess the environmental impact of the project had also recommended the Kanjurmarg plot.
- But the MMRCL officials emphasise that Aarey is the most suitable place due to its connectivity to three major roads – the Jogeshwari-Vikhroli Link Road, Marol-Maroshi road and Goregaon-Mulund Link Road.

### Significance of Metro Project

- The MMRCL has argued that the Metro will bring enormous environmental benefits by reducing the overall carbon footprint: seven days of Metro operation is projected to cut carbon dioxide equivalent to that absorbed by 2,700 trees in a year.

- According to a study Mumbai Metro Line -3 (MML-3) project will carry 17 lakh passengers every day and thereby removing 6.5 lakh vehicle trips off the road, which will, in turn, reduce 2.61 lakh tonnes of CO<sub>2</sub> pollution every year.

\* If the same amount of pollution is to be reduced just by planting trees, Mumbai would need more than two crore trees, for which there is no space in the city.

- Every day, at least 10 people die on suburban rail tracks either because of trespassing or by falling from crowded trains. About the same number of people get injured. The loss of 3,500-4,000 lives every year for the past many years has been a matter of great concern for India's financial capital.
- \* Many families have been devastated by the untimely death of their bread earner in such mishaps. Precious lives can be saved only if there is a substantial capacity expansion of rail-based public transport, the Metro.
- Tree cutting may cause temporary strain to the environment but the benefits of Metro-3 in terms of reduction in pollution, reduction in traffic congestion and saving of lives substantially outweigh this environmental strain.

#### **Current status**

- The Mumbai Metro Rail Corporation Limited (MMRCL) has felled 2,141 trees. It was granted this permission by the Tree Authority; this permission was challenged at the Bombay High Court.
- The court dismissed the petition and allowed MMRCL to proceed with its scheduled work on the project.
- The protestors leading one group of concerned citizens approached the Supreme Court, which has ordered a status quo on the cutting off trees.
- \* The Supreme Court has directed the Maharashtra government to stop cutting more trees in Mumbai's Aarey Colony till October 21, and file a report on the status of saplings it has planted in the area.

## **2. C40 Cities Climate Summit**

- The C40 Summit is a network of the world's megacities committed to addressing climate change.
- It is a unique forum for member cities to present the innovative actions they have taken to reduce greenhouse gas emissions and improve climate resilience; influence decision makers - from fellow mayors to CEOs and national leaders - to take the bold and urgent action needed to keep global temperature rise to below 1.5 °C; and inspire participants and citizens to take climate action in their own lives.
- C40 Cities connects 94 of the world's greatest cities to take bold climate action, leading the way towards a healthier and more sustainable future

#### **Background**

- C40 started in October 2005 when London Mayor Livingstone convened representatives from 18 megacities to forge an agreement on cooperatively reducing climate pollution and created the 'C20'
- In 2006, Mayor Livingstone and the Clinton Climate Initiative (CCI)—led by the efforts of former U.S. President Bill Clinton—combined to strengthen both organizations, bringing the number of cities in the network to 40
- Over the past decade, C40 has convened six Mayors Summits, hosted by London (2005), New York (2007), Seoul (2009), Sao Paulo (2011), Johannesburg (2014) and Mexico City (2016).

#### **Indian Cities**

- Bengaluru
- Chennai
- Jaipur
- Kolkata
- Mumbai
- New Delhi

#### **Issue Area**

- Urbanization will remain a strong trend this century. Annually, about 70 million people will be drawn to cities and towns for the next three decades, according to the special report on global warming of 1.5°C issued by the Intergovernmental Panel on Climate Change in 2018.
- This means mayors of cities worldwide, and State governments in India, must prepare for difficult times with action plans for urban centres.

#### **An opportunity for India**

- This is a Greenfield opportunity for policymakers, since much of the infrastructure in India remains to be built, unlike cities in the developed world. All planning must therefore be climate-centric.
- Determined policies can restore the power of the commons: through inclusive and green urban spaces, sustainable mobility, protected water sources and a reduction of waste — all of which will sharply reduce carbon emissions in a growing economy.

#### **Innovative steps that can be tried**

- China's Hangzhou has the largest public bicycle-sharing system and is moving to a smart bus service.
- Hong Kong is ready to harvest super typhoons in new drainage tunnels that will reuse rainwater and grow biodiversity.
- Singapore will put a price on carbon.

### Way forward

- India's fast-expanding cities and towns need far-sighted measures. Climate change should be integral to planning
- It will take innovation, technology and financing to adapt to drought, floods and heat islands.
- Environment Ministry should help States to come up with city-level action plans, since the country lacks empowered mayors.
- India's urbanisation should move to a trajectory of low emissions, reflected in urban governance that incentivises eco-friendly design. It should be friendly to people, and rely on the right technology, materials and energy systems.

### **To go abroad, what clearances do CMs need?**

#### Context

- Delhi Chief Minister Arvind Kejriwal addressed a conference in Denmark through videoconferencing, with the Centre having denied clearance to a trip abroad.

#### Why clearance?

- For a foreign trip, public servants need political clearance from the External Affairs Ministry.
- Since 2016, applications for political clearance can be made online, on a portal opened by the Ministry. These are processed and clearance issued through coordination among various Ministry divisions.

#### Previous CMs denied

- During the previous UPA regime, the External Affairs Ministry denied political clearance for trips by then Chief Ministers Tarun Gogoi (Assam, Congress) to the US and Israel, and to Arjun Munda (Jharkhand, BJP) to Thailand.

#### Debate over protocol

- On June 14, 2014, then Civil Aviation Secretary Ashok Lavasa (now Election Commissioner) wrote to then Cabinet Secretary Ajit Seth that the "dilatatory system" of the External Affairs Ministry clearing all proposals for travel abroad by officials should be changed.
- Seth forwarded the letter to the Ministry; then Foreign Secretary Sujatha Singh wrote back on August 13, 2014. She stressed it was the Ministry's prerogative to decide on the suitability, desirability and level of participation of Indian officials in engagements abroad.

#### Other clearances

While all public servants need political clearance for foreign trips, different officers need different additional clearances.

- Chief Ministers, state ministers and other state officials also need clearance from the Department of Economic Affairs.

- For Union ministers, after getting political clearance from the External Affairs Ministry, additional clearance is needed from the Prime Minister, whether the trip is official or personal.
- Lok Sabha MPs need clearance from the Speaker, and Rajya Sabha members from the Chairperson (Vice President of India).
- For various ministry officers up to Joint Secretary level, clearance is given by the minister concerned, after political clearance. For those above that rank, the proposal needs approval of a screening committee of secretaries.
- Rules vary according to the duration of the visit, the country to be visited, and the number of members in a delegation.
- If the foreign trip involves the hospitality of organisations other than those of the UN, then FCRA clearance is needed from the Home Ministry.

### **3. Centre clarifies on definition of land as forest**

#### Forest Advisory Committee

- The Forest Advisory Committee is a key statutory body under the Ministry of Environment and Forests (MoEF)
- The committee was constituted under the Forest Conservation Act, 1980.
- The FAC, with seven members four from the Govt and three of them independent — is headed by the Director General of Forests as Chairman
- It considers questions on the diversion of forest land for non-forest uses such as mining, industrial projects, townships and advises the government on the issue of granting forest clearances.
- While its role is advisory

#### TN Godavarman Thirumulpad vs Union of India (SC)

- "The word 'forest' has not been defined in the Indian Forest Act, 1927 nor the Forest (Conservation) Act 1980.
  - \* Therefore Forest must be understood according to its dictionary meaning which would mean a large tract of land covered by trees on which no agricultural activity is undertaken.
  - \* Or land recorded as forest on any government record
- So SC directed state governments to identify areas which are "forests", irrespective of whether they are so notified, recognised or classified under any law, and irrespective of the ownership of the land.

#### Background

- Since 2014, the Ministry of Environment, Forest and Climate Change (MoEF&CC) has been considering evolving a legal definition of forest and reportedly prepared drafts as late as 2016.



- These, however, have never been made public

#### **Current Ruling of FAC**

- The States need not take the Centre's approval to define what constitutes unclassified land as forest, the Forest Advisory Committee (FAC) of the environment ministry
- States, having well established forest departments, are in a better position, rather than MoEF&CC, to understand their own forests and needs, and should frame criteria for their forests... criteria so finalised by a state need not be subject to approval by MoEF&CC

#### **Why is this important?**

- The definition has a direct impact on forest and biodiversity conservation, implementation of tribal rights, land acquisition and land diversion for non-forest use.
- Defining forest will determine which tracts of land will need the Environment Ministry's approval before being diverted for infrastructural or industrial purposes under the Forest Conservation Act.

#### **4. Drone cameras threatening Nilgiris wildlife**

##### **Context:**

- Wildlife enthusiasts believe that the drone cameras pose a huge threat to wildlife.

##### **Concerns:**

- Environment conservationists are concerned about the increasing number of enthusiasts using drone cameras which is found to have been posing a significant threat to the endangered species of birds.
- Species of Birds, especially raptors, many of which are known to attack the equipment, sustain injuries in the process.
  - \* When birds attack these cameras, the rotor blades of the equipment can cause life-threatening injuries to them.
  - \* Raptors, when threatened, are known to even abandon nesting sites.
- Videos of elephants being absolutely petrified by drone cameras have also been found.
- When animals come into contact with drones, they may experience physiological changes such as an increased heart rate, behavioural responses such as running or flying away, or even suffer stress that could disrupt their reproductive process.
- If the animals decide to avoid specific areas as a result of frequent disturbing drone encounters, this could fragment and ultimately damage the whole population.

##### **Way forward:**

- There is a ban on using drones in reserve forests, unless the written permission is obtained from the Chief Wildlife Warden; this must be implemented effectively.

- There is a need for a legal framework so that appropriate actions can be taken when wildlife is negatively affected by irresponsible drone operators.
- Care should be taken to avoid endangered species, animals that may be more vulnerable to drone presence like those that fly or who have evolved to fear aerial predators, and to never interfere with animals during sensitive times in their life cycle, such as breeding seasons.
- When drones are operated correctly, there's a chance to help people feel more connected with wildlife, which is extremely important for conservation outcomes.
- While a blanket ban on drones is impossible to enforce, the forest department should identify areas where vultures and other raptor species are known to nest, and set up effective policing to prevent the unauthorised use of cameras and drones.

#### **5. Elephant Endotheliotropic Herpes Viruses (EEHV)**

##### **Context:**

- Four calves between the ages of six and ten have died in Nandan Kanan Zoo in Bhubaneswar, followed by the fifth elephant that died in Chandaka forest

##### **Details**

- EEHVs as a type of herpesvirus that can cause a highly fatal haemorrhagic disease in young Asian elephants.
- Most elephants carry just as most humans carry a cold virus. When EEHV is triggered, the elephant dies of massive internal bleeding and
  - \* EEHV causes rupturing of capillaries that leads to Edema, a medical condition wherein capillaries leak fluid into surrounding tissues.
  - \* Organs stop functioning due to lack of blood and the animal dies within 24 hours.
- Symptoms are hardly visible
  - \* Though adult elephants have been found carrying the virus, they do not show any sign of it.
  - \* The virus spreads from one elephant to another but not to other animals or human beings

##### **Concern**

- EEHV is lethal for young elephants between the ages of one and 12. If a young elephant dies before reproducing, it affects the population of the species as a whole in the concerned geography.

##### **Treatment**

- It is a combination of anti-viral therapy, aggressive fluid therapy (to counter haemorrhaging), immuno-stimulant drugs (selenium and Vitamins C, E), anti-pyretics and analgesics (to bring down fever)

## 6. Eravikulam National Park

- It is a national park located along the Western Ghats in the Idukki district of Kerala
- It is the first national park in Kerala.
- The terrain consists of high altitude grasslands interspersed with sholas.
  - \* Anamudi, 2,695 meters, the highest peak in India south of the Himalayas is inside this park.
- Many perennial streams criss-cross the park. They merge to form tributaries of the Periyar river in the west and of the Cauvery River in the east.
- Lakkom Water falls is in this region.

## 7. E-waste clinic

### Context

- The Bhopal Municipal Corporation (BMC) and the Central Pollution Control Board (CPCB) have joined hands to set up the country's first e-waste clinic that would enable segregation, processing and disposal of waste from both household and commercial units.

### Details

- Electronic waste will be collected door-to-door or could be deposited directly at the clinic in exchange for a fee.
- The CPCB will provide technical support at the unit
- The clinic is being conceived in compliance with the Solid Waste Management Rules, 2016.

## 8. Ganges River Dolphin

### Context:

- The annual Ganges river dolphin census has begun.

### Details:

- The census is undertaken by World Wide Fund for Nature-India in collaboration with the Uttar Pradesh Forest Department.
- The census will be carried out along about 250-km-long riverine stretch of Upper Ganga between Hastinapur Wildlife Sanctuary and Narora Ramsar site in Bijnore.
- During the previous censuses, direct counting method was used.
- This year the tandem boat survey method is being used.
  - \* The method, developed by the renowned river and marine ecologist Gill Braulik, provides a more accurate count of the dolphins.
  - \* The officials use two inflated boats that move in tandem to count the dolphins.
  - \* After collating the data, statistical tools are employed to arrive at the final count.

### Concerns:

- Once present in tens of thousands of numbers, the Ganges river dolphin has dwindled abysmally to less than 2000 during the last century owing to:
  - \* Direct killing
  - \* Habitat fragmentation by dams and barrages
  - \* Indiscriminate fishing.
- It is for these reasons that despite high level of protection, its numbers continue to decline.
- The absence of a coordinated conservation plan, lack of awareness and continuing anthropogenic pressure, are posing incessant threats to the existing dolphin population.

### Conservation Initiatives activated by the Government of India:

- Declared the Ganges River Dolphin as National Aquatic Animal on 10th May 2010 as recommended in the first meeting of NGRBA.
- A working group was formed to prepare conservation action plan for the Gangetic River Dolphin.
- Dolphin Awareness Program (Phase – I) has been completed.
- Further strengthening of networking is being taken up in Phase- II with NGOs, schools and teachers in Ganga and Brahmaputra river basins.
- In the upper Ganga. 164 kms stretch of dolphin habitat is under monitoring to minimize potentials threats.
- National Mission for Clean Ganga (NMCG) in its efforts of biodiversity conservation in the Ganga River basin has been working further on the Ganges River Dolphin Conservation Action Plans.

### Gangetic Dolphins:

- The animal is known to make strange sounds when it breathes, earning it the nickname 'Susu'.
- Being a mammal, it has to come to the surface to breathe.
- It is also called a blind dolphin because it doesn't have a crystalline eye lens and uses echolocation to navigate and hunt.
  - \* It is crucial to find prey in the murky waters of the Ganga.
  - \* Like bats, they produce high-frequency sounds which help them 'see' objects when the sound waves bounce off them.
- IUCN Red List classifies Gangetic Dolphin as Endangered.

## 9. Green Crackers

### Context

- In a bid to resolve the crisis of air pollution, the Government has launched green firecrackers

### Background

- The Supreme Court in October 2018 banned the sale, use and manufacture of crackers that weren't 'green' to reduce the pollution levels as firecrackers played a major role in exacerbating it
- This meant that these crackers couldn't be loud beyond a certain limit, had to be approved by the Petroleum and Explosives Safety Organisation (PESO) and had to be free of mercury, arsenic and barium.
- The court also restricted the time that crackers could be burst on Deepavali and police officials were tasked with enforcement.
- However, compliant crackers weren't available in the market.

Hence this led to development of green Crackers which could reduce the impact of pollution

### Green Crackers

- It has been developed by Council of Scientific and Industrial Research (CSIR)
  - \* Components in firecrackers are replaced with others that are "less dangerous" and "less harmful" to the atmosphere
- The commonly used pollution-causing chemicals – aluminium, barium, potassium nitrate and carbon – have either been removed or sharply reduced in the green crackers
- They include environment-friendly fireworks such as sound emitting crackers, flowerpots, pencils, chakkar and sparklers.

### Significance

- It would reduce particulate matter pollution by 30%.
  - \* On explosion, they reduce the dust and smoke typically associated with crackers by 30% and also decrease sulphur oxide and nitrous oxide emissions by 20%.
- These crackers cost the same as the older [banned ones] and are significantly greener
- A green logo as well as a Quick Response (QR) coding system has been developed for differentiation of green crackers from conventional crackers.
  - \* QR codes is a novel feature incorporated on the fire crackers to avoid manufacture and sale of counterfeit products.
  - \* This will also help the consumers to track the cracker using smart phones and other devices.
- This will also protect the livelihoods of millions of people engaged in manufacture and sale of fireworks across the country.

### Challenges

- The ban on crackers has meant a shortage of unskilled labour which is the mainstay of the industry. Also several manufacturers got the legal go-ahead to make the Green crackers only in May 2019. This will not give the manufacturers enough time to make and supply crackers across the country for Deepavali. The supply chains are not yet adapted green crackers.
- The reach of the 'green crackers' has been limited. Given the very few companies manufacturing it. This is bound to increase the costs of the firecrackers and affect the affordability.
- Lack of legal clarity on a sub-category of green crackers called "improved crackers", which uses barium nitrate but in extremely reduced amounts. The harmful effects are limited as compared to traditional crackers. The Supreme Court is yet to take a decision on whether to allow them. This uncertainty will lead to lack of clarity among the buyers and sellers.
- There is always the risk of counterfeit crackers going on sale in the lack of strict enforcement.
- The size of the cracker market is reportedly valued at around ₹1,800 crore and is expected to take a severe hit this year.
  - \* The livelihood opportunities of the people employed in this sector is bound to be hurt during this transitional phase.
  - \* Families who are only into manufacture of crackers may face issues of livelihood
- Although it has been claimed that green crackers result in 30% reduction in emissions, these numbers have been computed in a laboratory setting and not been verified in real world conditions.
- Lack of awareness of the issue of pollution has led to lackadaisical attitude among the public regarding the SC guidelines.

### Conclusion

- The above case illustrates the importance of generating public opinion and spreading awareness on the relevant issues along with suitable alternative for the successful implementation of any desirable change in society. Educating the public on the harmful effects of firecrackers would be more effective than policing to regulate the use of firecrackers.
- A bottom up approach would be more efficient and less destructive while initiating changes.
- It is time there is adaptation to green crackers to reduce the harmful impact of pollution.
- The Government will also have to ensure there is alternative channels of livelihood provided for the ones whose only source of income was crackers.

- Air pollution is a serious challenge for India and this positive guideline is a step in the right direction to address this issue. The changed times require some changes in cultural practices too. Initiatives like the Laser show dubbed the electric Diwali are positive developments.

## **10. Green energy target lacks deadline**

### **Context**

- Prime Minister Narendra Modi at the Climate Action Summit in New York announced India's ambitious aim to increase its renewable energy target to 450 GW (gigawatts).
- A senior official in the Union Environment Ministry has pointed out that there is not yet a deadline for when this target would be achieved.

### **Details:**

- India had previously set a target for increasing the non-fossil fuels to 175 GW in 2022.
  - \* India's plan for installing 175 GW of renewable energy capacity by 2022 was first announced in 2015 during then Finance Minister Arun Jaitley's Budget speech.
- It included 100 GW from solar, 60 GW from wind, 10 GW from bio-power and 5 GW from small hydro-power.
- Recent announcements highlight India's aim to achieve 450 GW target, with no particular deadline.

### **Concerns:**

- Given that the country right now has an installed renewable energy capacity of 80.47 GW, of which 29.55 GW is solar, 36.37 GW is wind, 9.81 GW is biomass and 4.6GW is small hydropower, achieving the 450 GW target, which is a more than 460 per cent jump from the current level, in 3-5 years is an extremely tough task. For the record, India's renewable power capacity had jumped nearly 150 per cent in the past five years.
- The announcement comes at a time when commissioning of projects has slowed and states are raising red flags.
- Slow project allocation and financial stress have halted wind power projects.
  - \* As India expands its renewables portfolio, wind power seems to be losing steam. Leading domestic wind turbine manufacturers, with more than 80 per cent market share, are staring at a weak order pipeline, financial losses and regulatory niggles. Foreign companies, including some Chinese ones, are increasing footprint in India.
  - \* Commissioning from wind power projects has slowed to historic lows.

- Solar projects have been facing land crunch and grid connectivity issues.
  - \* In solar, the challenge is the low capacity of domestic solar panels and increased influx of imports from China.

### **Way forward:**

- The renewable energy ministry is planning to introduce a standard Power-Purchase Agreement (PPA) for projects.
  - \* The terms of the PPA will ensure any default from the procuring state would lead to stringent penalty. A letter of credit-type system of payment would be made mandatory.
- To sort out land-acquisition issues, the ministry plans to change the project-award system.
  - \* The government will acquire the land.
  - \* Special-purpose vehicles (SPVs) will be formed by state-owned companies.
  - \* The land will then be allotted to private companies bidding for projects
- The government should implement anti-dumping duty on a priority to deal with cut-throat competition from international players.
- In order to boost Make in India, the renewable power ministry has asked the Ministry of Finance to impose a Customs duty on solar cells and modules being imported into the country.

## **11. Hindon River- Sanitation force to clean**

- It is a tributary of the Yamuna
- Also known as Harnandi, the rain-fed river originates in the lower Himalayas in Saharanpur and passes through six districts in western Uttar Pradesh.
- The pollution levels here have earned it a 'dead river' status and its water declared 'unfit' even for bathing, according to the Central Pollution Control Board report of 2015.

### **Water Pollution**

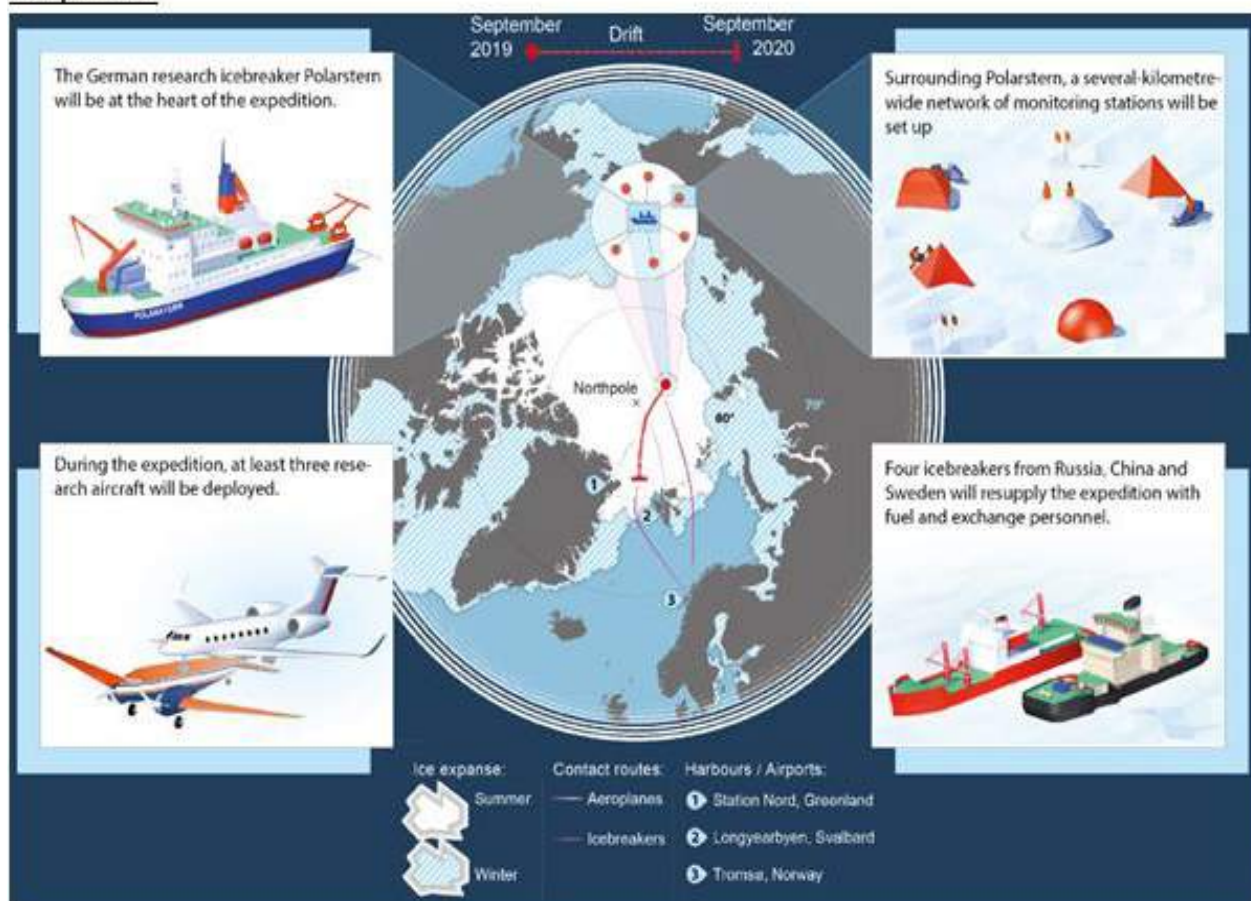
- The discharge of untreated sewage and industrial effluents into the rivers is mainly responsible for the pollution of the Hindon
- Those living along this river dump their waste, be it sewage or solid waste, into the river.
- A test by senior scientist from the Haryana State Pollution Control Board has confirmed several chemicals such as cadmium, chromium, nickel, cobalt, arsenic, lead, mercury and other heavy metals were found in the water samples

### **Health Impact**

- The deteriorating quality of the water in the Hindon River is a health hazard, which could lead to serious kidney malfunction issues



## Components



- It can cause skin disease and other problems like hepatitis or even cancer
- Farmers use water from Hindon for agriculture
  - \* Vegetables and crops are grown using this polluted water because farmers have no other choice. This has poisoned the food chain and the food production is contaminated with chemicals

### Context

- The Ghaziabad district administration will constitute a sanitation force to clean up the Hindon river

### Details

- A sanitation force will be constituted for cleaning the river. Local residents can also be a part of it
- The irrigation department has been ordered to purchase the necessary equipment to weed out the water hyacinths
- The civil defence will also help in cleaning the river.

## 12. Multidisciplinary drifting Observatory for the Study of Arctic Climate (MOSAIC)

- MOSAiC is a one-year-long expedition into the central Arctic exploring the Arctic climate system
- It is designed by an international consortium of leading polar research institutions, under the umbrella of the International Arctic Science Committee (IASC)

### What is unique about this project?

- Previous studies have been of shorter periods as the thicker sea ice sheets prevent access in winter. But this project in total, during the various phases of the expedition, more than 600 people will be working in the Central Arctic. The international expedition will also involve more than 60 institutions from 19 countries
- In terms of the logistical challenges involved, the total number of participants, the number of participating countries, and the available budget, MOSAiC represents the largest Arctic expedition in history



### Significance

- The results of MOSAiC will contribute to enhance understanding of the regional and global consequences of Arctic climate change and sea-ice loss and improve weather and climate predictions.
- This year 2019, we have the second lowest sea ice extent in the past 50 years, accentuated by anthropogenic activities.
  - \* With lesser ice cover, more of the Arctic Ocean is exposed to sunlight for longer periods, causing increase of temperatures across the Indian, Pacific and Atlantic Oceans.
  - \* As the ocean gets warmer, it influences global weather patterns, causing changes in monsoon patterns and triggering more destructive cyclones.
- The data we will be gathering in this expedition related to these will be of immense use to the upcoming generation of young scientists

### Context

- India's Vishnu Nandan among 300 researchers to join largest ever Arctic expedition

### **13. Saharan silver ant**

- The Saharan silver ant is declared the world's fastest ant.
- It is the fastest of the world's 12,000 known ant species, covering 855 millimetres — nearly a metre — per second.
- The ant is six-legged and covers 108 times its own body length per second.
- The ants are outpaced only by a few invertebrates: The Australian tiger beetle and the California coastal mite.
- The Saharan silver hits top speed racing at midday across desert sands that reach 60°C.
- The ants' super speed is likely one of their adaptations to life in the harsh desert, allowing them to go about their business quickly before getting roasted in temperatures
- At top speed, the Saharan silver easily outpaces its nearest ant competitor *Cataglyphis fortis* — despite having significantly shorter legs.

### **14. World Animal Day**

- It is a social movement charged with the Mission of raising the status of animals in order to improve welfare standards around the globe

- It was started in 1931 at a convention of ecologists in Florence, Italy, as a way of highlighting the plight of endangered species.
- It takes place annually on 4 October, chosen as it is the feast day of St Francis of Assisi.

### Importance of species diversity

- The Bee, whose population is declining at an alarming rate today because of climate change, pesticides and habitat loss.
  - \* Bees pollinate 70 of nearly 100 crop species that feed 90% of the world.
- Insects help in the decomposition of organic materials, including bodies of the dead, and enrich the soil.
  - \* Half of the world's species are insects, so if insects go extinct, the consequence would be complete degradation of our soil consequently leading to the disappearance of all remaining life.
- Dung beetles evolved 65 million years ago and, as their name suggests, eat dung, recycle nutrients and improve the quality of the soil.

### Concern for animal rights in the farming Sector

- We keep billions of animals intensively confined in factory farms for meat, eggs and dairy. There are serious repercussions of these practices, both for animals and humans.
- Hens kept in battery cage farms see the sun twice in their lives — once on the way to the farm and the second on the way to the slaughterhouse. These factory farms are responsible for the formation of dead pools around them, have a massive odour, and attract pests.
- The people who live in the vicinity of these farms suffer from several health issues including breathing problems.
- Hence, while it may make financial sense to cram animals into factory farms, the consequences can be considerable.

### Deleterious impact of animal agriculture

- Research shows that the Amazon fires were caused by ranchers who wanted to use the land for cattle grazing and farming.
- Indian forests are also being degraded by the excessive pressure of animal agriculture.
- The United Nations has found that "livestock production is one of the major causes of the world's most pressing environmental problems, including global warming, land degradation, air and water pollution, and loss of biodiversity".

### Steps that can be taken

- To mitigate this, the system of intensive farm animal production needs to become more humane and less exploitative, for both animals and people.
- Governments can take a first step by prohibiting the cruelty of battery cages.
- Animal lives can be saved by commercialising the innovations of plant-based and cultured or clean meat.
  - \* Clean meat is grown in a lab from a small sample of cells taken from an animal.
  - \* Both plant-based meat and clean meat are free of the negative externalities that animal meat production is responsible for, such as climate change, and are healthier as they are also free of antibiotics.

## **15. Zingiber Perenense and Zingiber Dimapurense**

### Context

- Scientists from the Botanical Survey of India (BSI) have discovered two new species of Zingiber, commonly referred to as ginger, from Nagaland.
- Zingiber perenense has been discovered from the Peren district of Nagaland,
- Zingiber dimapurense was found in the Dimapur district of the State.

### Details

- Zingiber dimapurense is taller in size, with leafy shoots measuring 90-120 cm high, whereas the leafy shoots of Zingiber perenense reach up to 70 cm in height.
- Zingiber dimapurense:
  - \* The lip of the flower (modified corolla) is white in colour, with dense dark- purplish red blotches.
  - \* Its pollen is a creamy-white and ovato-ellipsoidal
  - \* The fruit is an oblong 4.5 cm-5.5 cm long capsule.
- Zingiber perenense:
  - \* The lip of the flower is white with purplish-red streaks throughout
  - \* The pollen is ellipsoidal.
- The genus Zingiber has 141 species distributed throughout Asia, Australia and the South Pacific, with its centre of diversity in Southeast Asia.
- More than 20 species have been found in northeastern India. The high diversity of ginger species in northeast India reveals that the climate is conducive for the growth and diversity of the genus.

- Previous discoveries of Zingiber include:
  - \* Hedychium chingmeianum from the Tuensang district of Nagaland
  - \* Caulokaempferia dinabandhuensis from the Ukhrul district in Manipur,
  - \* Zingiber bipinianum from Meghalaya.
- The rhizome of Zingiber officinale (common ginger) is used as a spice in kitchens across Asia, and also for its medicinal value. Some wild species of Zingiber have immense horticultural importance.

## **16. 'Foreign' plastic invades Great Nicobar Island**

### Context

- A survey of five beaches in the Great Nicobar Island has recorded plastic that is found to be of 'non-Indian origin'.

### Details:

- About 10 countries including India contribute to the plastic litter in the island.
- They are Malaysia, Indonesia, Thailand, Singapore, Philippines, Vietnam, India, Myanmar, China and Japan.
  - \* Major portion of the litter (40.5%) was of Malaysian origin. It was followed by Indonesia (23.9%) and Thailand (16.3%).
  - \* Other countries contributed a minor portion.
  - \* The litter of Indian origin only amounted to 2.2%.
- The overwhelming contribution from Indonesia and Thailand was likely due to its proximity to the island; the plastic is likely to have made its way to the island because of water currents via the Malacca Strait, which is a major shipping route.
- The huge quantities of marine debris observed on this island could be due to improper handling of the solid waste from fishing/mariculture activity and ship traffic.

Country	S-1*	S-2*	S-3*	S-4*	S-5*
Indonesia	24.2	23.8	23.5	22.6	25.2
Malaysia	37.4	45.0	44.7	39.6	36.0
Vietnam	2.2	1.3	2.4	2.8	2.7
Thailand	15.4	12.5	18.8	17.0	18.0
Myanmar	2.2	2.5	0.0	1.9	3.6
Singapore	6.6	10.0	5.9	9.4	5.4
China	2.2	0.0	2.4	1.9	3.6
The Philippines	2.2	2.5	1.2	2.8	3.6
Japan	2.2	0.0	0.0	0.9	0.9
India	5.5	2.5	1.2	0.9	0.9

\* S-1 to S-5 are five beach areas in the eastern part of the Great Nicobar Island

### Concerns:

- Plastic pollution has emerged as one of the severest threats to ocean ecosystems and its concentration has reached 5,80,000 pieces per square kilometre.
- Plastic represents 83% of the marine litter found.
- The remaining 17% is mainly textiles, paper, metal and wood.

## **17. BASIC Ministerial Meet on Climate Change**

### Context

- The 29th BASIC Ministerial Meeting on Climate Change was held in Beijing, China.
- The countries include BASIC (Brazil, South Africa, India, China).

### Important Commitments

- BASIC Ministers expressed their concern for the global challenge of climate change and its adverse effects, and confirmed their commitments to multilateralism in order to address the issue and to foster climate resilience and promote greenhouse gas emissions reduction, low-carbon and sustainable development, with a view to collectively working towards preparedness of international community for the wellbeing of all.
- Ministers underscored that all parties should jointly defend the international system underpinned by the United Nations, in accordance with the principles of equity, Common But Differentiated Responsibilities and Respective Capabilities (CBDR-RC), in the light of different national circumstances.
  - \* They felt that Unilateralism and protectionism undermine the open and free international trade system and the prospect of global economic development and growth, which will end up with damaging global efforts against climate change.
  - \* It is imperative to focus on safeguarding the multilateral process and the fulfillment of commitments.
- The BASIC Ministers reaffirmed and emphasized the need for people's participation and climate friendly lifestyles for addressing the challenge of climate change acknowledging that Paris Agreement embodies and calls for sustainable lifestyles and consumption patterns.

### Contributions made by developed countries should be timely

Ministers underscored that as developing countries are the most adversely affected by climate change, adaptation is a key imperative but is neglected with imbalanced allocation of resources compared to mitigation.

- They reiterated that balanced allocation should be made for adaptation and mitigation in terms of support provided by developed countries, including through Green Climate Fund (GCF).

- \* The Group encouraged other fora, including the Global Commission on Adaptation to play their part in supporting developing countries on adaptation.

- BASIC countries have urged the developed countries to take urgent action to close gaps and provide support to developing nations as a part of the commitment under the Paris agreement on climate change.

- Ministers urged developed countries to propose the new collective quantified goal on finance as soon as possible, including detailed roadmap and timetable.

### Assistance and Collaboration among BASIC Courtiers

- They agreed to further strengthen the solidarity and cooperation among the four countries.
- They committed to jointly promote South-South cooperation, providing assistance as capabilities allow to enhance the capacities of other developing countries in addressing climate change.

## **18. First National Protocol to Enumerate Snow Leopard**

### Population in India Launched

#### Context

The Union Minister for Environment, Forest and Climate Change (MoEFCC) launched the First National Protocol on Snow Leopard Population Assessment in India, on the occasion of International Snow Leopard Day.

About the Snow Leopard Population Assessment in India (SPAI)

- The Assessment has been developed by scientific experts in association with the Snow Leopard States/UTs. Snow leopard states/UTs are:
  - \* Ladakh
  - \* Jammu & Kashmir
  - \* Himachal Pradesh
  - \* Uttarakhand
  - \* Sikkim
  - \* Arunachal Pradesh
- The assessment was unveiled at the 4th steering committee meeting of the Global Snow Leopard & Ecosystem Protection (GSLEP)
- The SPAI is expected to lead to scientifically robust national and state-wise population estimates of this endangered and elusive cat across its high altitude habitat, both inside and outside protected areas.
- Additional benefits expected out of SPAI:

- \* Reliable distribution map of snow leopards
- \* Spatial mapping of threats faced by the species across different parts of its range
- \* Identification of important population and biodiversity sites in need of greater protection
- \* Capacity building of young conservationists and local champions
- \* Identification of potential refugia for snow leopards in response to various pressures such as global climate change
- The guidelines for SPAI bring together the best practices from various resources, including guidelines prepared by Wildlife Institute of India (WII), Nature Conservation Foundation (NCF), PAWS Technical Support Committee of GSLEP, GTI Council, WWF, World Bank Group, Wildlife Conservation Trust and the Global Tiger Forum.
- SPAI is also referred to as Population Assessment of World's Snow Leopards (PAWS) for India.

**About the Global Snow Leopard & Ecosystem Protection Program (GSLEP):**

- The GSLEP is a joint initiative that aims to conserve the endangered snow leopard within the broader context of also conserving valuable high mountain ecosystems.
- GSLEP unites all 12 range country governments (snow leopards are found only in 12 countries), nongovernmental and inter-governmental organisations, local communities, and the private sector around this aim.
- The snow leopard range countries have agreed to work together to identify and secure at least 23 snow leopard landscapes by the year 2020.
- The two-day international meeting of GSLEP Program (where the National Protocol was launched) is being organized by the GOI's Ministry of Environment, Forest and Climate Change at New Delhi.

**About the International Snow Leopard Day:**

- This day is observed every year on 23rd
- This date was chosen because it was the day in 2013 when political leaders from 12 countries came together for the first time to endorse the "Bishkek Declaration" on the conservation of snow leopards.
- The 12 leaders came together in the Global Snow Leopard Forum held in the Kyrgyz capital Bishkek, with a shared goal of conserving snow leopards and their fragile habitats.
- The GSLEP was also launched on this day.

**About the Snow Leopard:**

- The snow leopard is a large cat native to the mountain ranges of Central and South Asia.
- Its scientific name is *Panthera uncia*. It is also called ounce.
- It is listed as 'Vulnerable' on the IUCN Red List.
- It is threatened by poaching and habitat destruction.
- It is found in 12 countries:
  - \* India
  - \* China
  - \* Kyrgyzstan
  - \* Afghanistan
  - \* Bhutan
  - \* Mongolia
  - \* Kazakhstan
  - \* Nepal
  - \* Pakistan
  - \* Russia
  - \* Tajikistan
  - \* Uzbekistan
- In India, they inhabit the higher Himalayan and Trans Himalayan landscape in an altitudinal range between approximately 3,000 m to 5,400 m above mean sea level.
  - \* Jammu & Kashmir
  - \* Himachal Pradesh
  - \* Arunachal Pradesh
  - \* Uttarakhand
  - \* Sikkim
- This area contributes to about 5% of the global snow leopard range.
- Long term research and conservation efforts in India have made it one of the best-researched snow leopard range countries in the world.
- The snow leopard is the indicator of the health and sustainability of the mountain ecosystem that provides water to up to 60 per cent of the world's population (Central Asia and the Tibetan Plateau).

**19. mHariyali**

**Context**

- Mobile App, "mHariyali" Launched for 'Environment Protection in Government Colonies' Website

**Details:**

- The app is aimed to encourage Public engagement in planting trees and other such Green drives.
- People can now upload information/photos of any plantation done by them, which is linked to the app and will be displayed on the official website [www.epgc.gov.in](http://www.epgc.gov.in).
- The App provides for automatic geo-tagging of plants.
- This app will also enable nodal officers to periodically monitor the plantation.



# HEALTH ISSUES

## 1. Central Government Health Scheme (CGHS)

- It is a comprehensive medical care to the Central Government employees and pensioners provided by Central Government
- The scheme offers reimbursement and cashless facilities to enrolled members.

### **CGHS provides health care through following systems of Medicine**

- Allopathic
- Homoeopathic
- Indian system of medicine
  - \* Ayurveda
  - \* Unani
  - \* Siddha and
  - \* Yoga

### **The following group of people are eligible to avail CGHS:**

- All employees of the Central Government who draw their salary from central civil estimates
- The dependent family members of the Central Government employees who draw their salary from Central Civil Estimates and reside in areas covered under the CGHS
- Pensioners and family pensioners of the Central Government, who receive pension from central civil estimates
- The eligible dependent family members of pensioners and family pensioners of the Central Government who receive pension from central civil estimates
- Members of parliament, both ex- and sitting
- Ex-vice presidents
- Retired judges of high courts
- Freedom fighters
- Retired as well as sitting judges of Supreme Court
- Journalists accredited with Press Information Bureau
- Employees of the Railway Board
- Delhi Police Personnel
- Pensioners and employees of certain statutory/autonomous bodies that have been extended CGHS facilities in Delhi

### **Context**

- Govt seeks suggestions to make CGHS more beneficiary-friendly

### **Details**

- To improve the services and make the Central Government Health Scheme (CGHS) more beneficiary friendly, the government has invited the beneficiaries and other stakeholders to send in their suggestions by the end of November
- The suggestions can be sent through e-mail or by letters indicating the issue involved and ways to make this service better.

### **What was the need for this?**

- The government had previously instructed that under emergency conditions a beneficiary should get admission in any CGHS empanelled hospital without any prior permission.
- However, they found that hospitals were denying admission or insisting on referral memo from the CGHS Wellness Centre even in emergency conditions.

### **Steps taken**

- All hospitals have been told that in emergency the empanelled hospitals will not refuse admission or demand advance payment from the beneficiary or his family member and will provide credit facilities to the patient.
- So the central Govt directed that any refusal to provide treatment to CGHS beneficiaries in emergency cases and other eligible categories of beneficiaries on credit basis, without valid ground, would attract disqualification for continuation of empanelment.
- The empanelled private hospitals under the CGHS provides treatment to the pensioners on credit/cashless basis for the procedures for which they are empanelled.

## 2. Comprehensive National Nutrition Survey

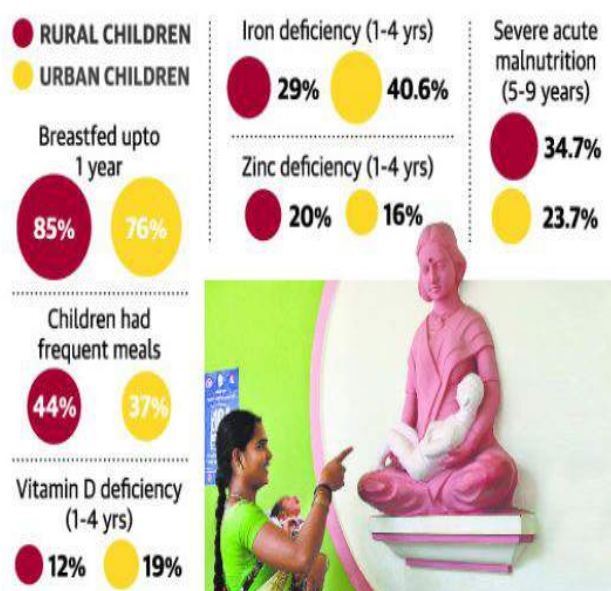
- Comprehensive National Nutrition Survey (CNNS) is a cross-sectional, household survey covering more than 1,20,000 children and adolescents in both urban and rural areas across India.
- It aimed at assessing the national prevalence of biological indicators (micronutrient deficiencies, subclinical inflammation, and worm infestation) and prevalence of overweight/obesity, along with information on body composition, cardio-metabolic risk, muscular strength, and fitness.
- The CNNS included three population groups – preschoolers 0-4 years, school-age children 5-9 years, and adolescents 10-19 years – in rural and urban areas.

- The survey has described the demographic and socio-economic characteristics of the sample population, including age, sex, place of residence, mother's schooling, caste, religion, household wealth status and dietary practices.
- This information is useful for understanding factors affecting the health and nutrition of children and adolescents across the country's diverse geographies and populations.
- This was the largest micronutrient survey ever implemented globally and used gold standard methods to assess anaemia, micronutrient deficiencies and biomarkers of non-communicable diseases among children for the first time in India.

#### **Context:**

- The first-ever Comprehensive National Nutrition Survey (CNNS) has been conducted by the Ministry of Health and Family Welfare and the United Nations Children Fund (UNICEF).

#### **Findings of the survey:**



- The survey found that the percentage of mothers with no formal education was high across the three age groups, with 31 per cent, 42 per cent, and 53 per cent of mothers of children aged 0-4, 5-9, and 10-19 years, respectively, not having attended school.
- Malnutrition among children in urban India is characterised by relatively poor levels of breastfeeding, higher prevalence of iron and Vitamin D deficiency as well as obesity due to long commute by working mothers, prosperity and lifestyle patterns.
  - \* It is believed that wealthier households in urban areas and sedentary lifestyles of children may also be responsible for a higher deficiency of Vitamin D in urban areas (19%) as compared to rural areas (12%).

- Rural parts of the country see a higher percentage of children suffering from stunting, underweight and wasting and lower consumption of milk products.
  - \* Rural children lag in intake of zinc which causes diarrhoea, growth retardation, loss of appetite and impaired immune function. Among children aged 1-4 years, zinc deficiency is more common in rural areas (20%) compared to urban areas (16%).
- 83% of children between 12 and 15 months continue to be breastfed, a higher proportion of children in this age group residing in rural areas are breastfed (85%) compared to children in urban areas (76%).
  - \* Breastfeeding is inversely proportional to household wealth and other factors influencing this trend may include working mothers who have to travel long distances to reach their workplace.
- Children and adolescents residing in urban areas also have a higher (40.6%) prevalence of iron deficiency compared to their rural counterparts (29%).
  - \* Experts say this is due to a better performance of the government's health programmes in rural areas.
- Children in urban areas are also overweight and obese as indicated by subscapular skinfold thickness (SSFT) for their age.
  - \* SSFT is an anthropometric measurement used to evaluate nutritional status by estimating the amount of subcutaneous fat — for their age.
  - \* Taking cognisance of the need for a special focus on urban areas under the Poshan Abhiyaan [Nutrition Mission], NITI Aayog is currently developing a strategy to deal with problems unique to children living in cities as well as factors hampering implementation of government programmes.
- Children are facing the double burden of malnutrition and rising risk of non-communicable diseases including diabetes, high cholesterol, chronic kidney disease and hypertension.
- The report presents data on the shifting conditions of both undernutrition and overweight, obesity among Indian children from 0-19 years.
- Abdominal obesity among children and adolescents showed that prevalence of abdominal obesity increased with the level of mother's schooling and household wealth.

## Nutrition woes

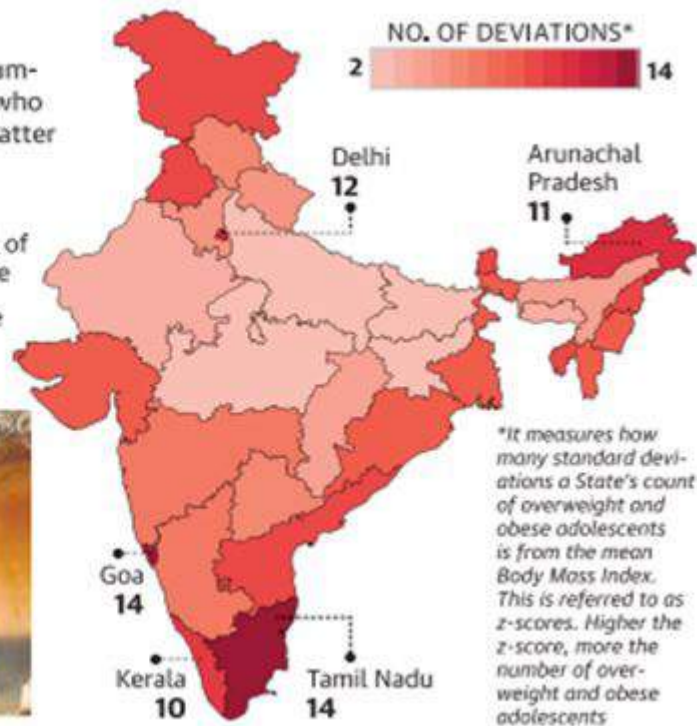
Tamil Nadu and Goa had the highest number of adolescents (aged 10-19 years) who were either overweight or obese. The latter had the most obese adolescents

10% children and adolescents are pre-diabetic

7% children and adolescents have risk of chronic kidney disease

4% adolescents have high cholesterol

5% adolescents were found to have high blood pressure



### 3. eDantseva website

- This is the initiative of the Health and Family Welfare Ministry in collaboration with AIIMS and other stakeholders.
  - \* It aims to sensitize the public about the significance of maintaining optimum oral health and equips them with the tools and knowledge to do so, including awareness on the nearest oral health service facility.
- e-DantSeva contains information about the National Oral Health Program, detailed list of all the dental facility and colleges, Information, Education and Communication (IEC) material and a unique feature called the 'Symptom Checker'.
- The symptom checker provides information on symptoms of dental/oral health problems, ways to prevent these, the treatment modes, and also directs the user to find their nearest available dental facility (public and private sectors both).
- The website also provides GPRS route/images/satellite images of the facility for easier access to the general population.

#### Context

- Union Minister of Health and Family Welfare launched the eDantseva website and mobile application, the first ever national digital platform on oral health information and knowledge dissemination.

### 4. Global Fund for AIDS, TB and Malaria

- Global Fund was created in 2002. It is an international financing and partnership organization that aims to "attract, leverage and invest additional resources to end the epidemics of HIV/AIDS, tuberculosis and malaria
- It mobilizes and invests more than US\$4 billion a year to support AIDS, tuberculosis and malaria programs run by local experts in more than 100 countries.
  - \* Funding comes primarily from the public sector, with about 93% of total funding coming from donor governments.
  - \* The remaining funding comes from the private sector, private foundations and innovative financing initiatives.
- The Global Fund is a financing mechanism rather than an implementing agency.
- It has its secretariat in Geneva, Switzerland
  - \* Programs are implemented by in-country partners such as ministries of health, while the Global Fund secretariat, whose staff only have an office in Geneva, monitor the programs.

#### Context

- India has announced a contribution of 22 million US Dollars to the Global Fund for AIDS, TB and Malaria (GFTAM) for the 6th replenishment cycle, an increase of 10% over the amount contributed by us in the 5th cycle.

## 5. Global Tuberculosis (TB) Report

- The World Health Organization (WHO) has published a global TB report every year since 1997.
- Its purpose is to provide a comprehensive and up-to-date assessment of the TB epidemic, and of progress in the response to the epidemic, at global, regional and country levels, in the context of global commitments and strategies.
- The report is based primarily on data gathered by WHO in annual rounds of data collection, and databases maintained by other multilateral agencies.
- The Global Report includes trends in TB incidence and mortality, data on case detection and treatment results for TB, multidrug-resistant TB (MDR-TB), TB/HIV, TB prevention, universal health coverage as well as financing.
- The report also includes an overview of pipelines for new TB diagnostics, drugs and vaccines. Additionally, it outlines a monitoring framework that features data on SDG indicators that can be used to identify key influences on the TB epidemic at national level and inform the multi-sectoral actions required to end the TB epidemic.

### Key stats

- The tuberculosis incidence rate in India has decreased by almost 50,000 patients over the past one year, according to the Report.
- The treatment success rate has increased to 81% for new and relapse cases (drug-sensitive) in 2017, which was 69% in 2016.
- In India, of the estimated 2.69 million TB cases emerging in 2018, 2.15 million were reported to the Government of India — leaving a gap of 5,40,000 patients who are going unreported.
- The India TB-Report 2019 notes that India is closest ever to covering all TB cases through the online notification system (NIKSHAY).

### What are the key challenges being faced by the government in its quest to restrict the spread of TB?

- There is no initial categorization of patients. The Category of TB that a patient is suffering from is not checked in the beginning and the first-line treatment is given which is useless for MDR cases thereby worsening the situation.
- TB treatment should be on a daily basis however alternate day treatment leaves the programme ineffective.
- There is poor monitoring of the fact whether the patient is regularly taking the doses or not. This is often wrongly reported.
- Actual number of cases reported in the National Register for TB is far less than the number of patients actually affected and hence the disease, being contagious, keeps on spreading.

- Demand and supply gap of the drugs is quite wide. Specific drugs are rather expensive, especially for the rural masses. There is lack of research and research-related funding towards patient-specific drugs.
- The TB Programme continues to face the challenge of under-reporting of cases from the private sector, which caters to a majority of cases.
- There is a poor sense of awareness and responsibility on the patient's part to complete the TB course.

## 6. National Digital Health Blueprint (NDHB)

### Context:

- The National Digital Health Blueprint (NDHB) Committee submitted the final NDHB report to the Union Health Minister.

### Details:

- The NDHB will help in providing a common platform for the integration of existing applications in health domain and data which has existed in silos, either in public health facility, or, in private healthcare facility, in India.
- The objectives of NDHB are aligned to the National Health Policy 2017 and the Sustainable Development Goals (SDGs) relating to the health sector.
- NDHB objectives:
  - \* To establish and manage the core digital health data and the infrastructure required for its seamless exchange.
  - \* To promote the adoption of open standards by all the actors in the National Digital Health Ecosystem (NDHE), for developing several digital health systems that span across the sector from wellness to disease management.
  - \* To create a system of Personal Health Records, based on international standards, which are easily accessible to the citizens and to the service providers, based on citizen-consent.
  - \* To follow the best principles of cooperative federalism while working with the States and UTs for fulfilling this vision.
  - \* To promote Health Data Analytics and Medical Research.
  - \* To improve the efficiency and effectiveness of Governance at all levels.
  - \* To ensure quality of healthcare.
  - \* To leverage the Information Systems already existing in the health sector.
- The report also recommended the creation of the National Digital Health Mission (NDHM), which would be a government organization on the lines of the UIDAI and the GSTN.



- The report is the result of the Committee's recognition that there was a need to create a framework for the evolution of a National Digital Health Eco-system (NDHE).

## **7. National Health Profile (NHP) 2019**

### **Context:**

- The NHP is prepared by the Central Bureau of Health Intelligence (CBHI) and covers comprehensive information on demographic, socio-economic health status, health finance indicators, health infrastructure and health of human resources in the country.
- 2019 is the 14th year the NHP is being released.
- It was released for the first time in 2005.
- The objective of the NHP is to create a versatile database of health information and making it available to all stakeholders in the healthcare sector.
- The NHP highlights substantial health information under major indicators viz. demographic indicators (population and vital statistics), socio-economic indicators (education, employment, housing and amenities, drinking water and sanitation) and health status indicators (incidence and prevalence of common communicable and non-communicable diseases and RCH), etc.
- The health finance section provides an overview of health insurance and expenditure on health, both public and Out of Pocket Expenditure (OOP), etc.
- The section on human resources provides an overview of availability of manpower working in the health sector, while health infrastructure section provides details of medical and dental colleges, AYUSH institutes, nursing courses and paramedical courses, etc.

### **Context:**

- The Union Health Minister released the National Health Profile, 2019.

## **8. Polio-2 out of 3 wild poliovirus strains have been eradicated, says WHO**

### **Context:**

- In an announcement by the World Health Organisation (WHO) on World Polio Day (24th of October), an independent commission of experts declared that wild poliovirus type 3 (WPV3) has been eradicated worldwide.
- The development follows eradication of smallpox and wild poliovirus type 2.

### **Details:**

- There are three individual and immunologically distinct wild poliovirus strains: Wild Poliovirus Type 1 (WPV1), Wild Poliovirus Type 2 (WPV2) and Wild Poliovirus Type 3 (WPV3).

- \* Symptomatically, all three strains are identical, in that they cause irreversible paralysis or even death.
- \* But there are genetic and virological differences, which make these three strains three separate viruses that must each be eradicated individually.

### **A look at key facts**

- Poliovirus type 1 remains in circulation in just two countries, Afghanistan and Pakistan.
- Type 2 was eradicated back in 2015.
- The last case of type 3 polio surfaced in northern Nigeria in 2012 and the virus hasn't been seen since. It is declared that Wild poliovirus type 3 is globally eradicated.

### **When is it considered eradicated?**

- A poliovirus can be considered eradicated if it hasn't been detected for three years.
- India, where polio was paralyzing 500 to 1,000 children per day in the 1990s, eliminated the disease in 2014.

### **Significance**

- The eradication of type 3 virus opens up the possibility of switching from the currently used bivalent oral polio vaccine containing type 1 and type 3 to a monovalent vaccine containing only type 1.
- This would lead to lower costs.
- It also helps reduce the number of vaccine-derived poliovirus (VDPV) cases.
- Vaccine-Associated Paralytic Polio (VAPP) can be greatly reduced if there is a switch from the bivalent to a monovalent vaccine containing only type 1, as type 3 poliovirus in the vaccine has the greatest propensity to cause VAPP. Though the risk of VAPP is small, it is caused when the live, weakened virus used in the vaccine turns virulent in the intestine of the vaccinated child or spreads to close contacts who have not been immunized.

## **9. Prospective Urban Rural Epidemiology (PURE) study**

### **Context:**

- According to the PURE study published in the Lancet, Cardio Vascular Disease (CVD) continues to be the leading cause of death across the world, but there are significant variations between rich and poor nations.

### **Categorization**

- The High Income Countries (HIC) in the study were Canada, Saudi Arabia, Sweden and United Arab Emirates.
- The Middle-Income Countries (MIC) were Argentina, Brazil, Chile, China, Columbia, Iran, Malaysia, Palestine, Philippines, Poland, Turkey and South Africa.
- The Low Income Countries (LIC) were Bangladesh, India, Pakistan, Tanzania and Zimbabwe.



### **Details**

- CVD is the leading cause for death overall, there have been some transitions, particularly in the high-income countries, which have managed to reduce the number of deaths from CVD.
  - \* While in HIC, death from cancer is twice that of CVD, in LIC, including India, death from cardiac disease was three times that of cancer.
- The study establishes that though risk factors are lower in low income countries, factors such as access to quality health care and lack of insurance have a play, leading to the mortality
  - \* Access to affordable, quality health care is still a dream in many pockets in India.
  - \* A great amount of out-of-pocket expenditure (according to Health Ministry data for 2014-15, nearly 62.6 % of India's total health expenditure) often frustrates continuation of treatment, or adherence to drug regimens.
- In another paper, also published in the Lancet, on 'Modifiable risk factors, cardiovascular disease, and mortality', researchers established indoor air pollution as an emerging source of risk for cardiovascular disease in LIC and MIC.

### **Steps that can be initiated**

- Some States have shown limited successes with government-sponsored health insurance schemes, the Centre's Ayushman Bharat Yojana will have to take much of the burden of hospitalisation for complications of non-communicable diseases.
  - \* Therefore National and State schemes running on mission mode, including the National Programme for Prevention and Control of Cancer, Diabetes, CVD and Stroke will have to step up efforts to target people at risk with life-saving interventions.
- With better insurance and improving hospital standards, it is possible for LIC to head towards similar outcomes
- The need of the hour is out-of-the-box solutions combined with inspiration from models of those who seem to have belled this particular cat.
- Any plans that target the risk factors and prevent the onset of non-communicable diseases will clearly have to be truly game-changing, and incorporate the environmental angle as well.

## **10. Ranitidine**

- Ranitidine, popularly known through brand names like Aciloc, Zinetac, Rantac and Rantac-OD, R-Loc and Ranitin, is an over-the-counter, prescription antacid used in the treatment of acid reflux and peptic ulcer diseases.

- It is commonly used to relieve acid-related indigestion and heartburn by decreasing stomach acid production.
- While other medicines like pantoprazole and omeprazole too treat these symptoms and are more commonly prescribed today, ranitidine is still widely used in India.

### **What is the problem?**

- The US FDA stated in a release that it had learned that some ranitidine medicines contained "low levels" of a substance called N-nitrosodimethylamine (NDMA).
- An environmental contaminant found in water and foods, NDMA has been classified by the International Agency for Research on Cancer as probably carcinogenic to humans, which means it has the potential to cause cancer.
- This is the same impurity that the US FDA had investigated in blood pressure drugs valsartan and losartan in 2018.

### **How has India's drug regulator responded?**

- India's top drug regulator wrote to state regulators asking them to direct ranitidine active pharmaceutical ingredient (API) manufacturers to "verify their products and take appropriate measures to ensure patient safety".

### **How have companies selling ranitidine in India responded?**

- At least two of the company's marketing top ranitidine brands here have decided to take precautionary measures like halting sales while investigations into their safety are in progress.
  - \* This includes GSK, which publicly announced a voluntary recall of its Zinetac brand
  - \* Torrent Pharmaceuticals, too, has "stopped the sales of this product" till it concludes a "detailed assessment" of its Ranitin

## **11. United to Eliminate Lymphatic Filariasis**

### **Context:**

- The Union Health Minister inaugurates National Symposium on the theme 'United to Eliminate Lymphatic Filariasis'.

### **Details**

- On the occasion, the minister signed the 'Call to Action to eliminate Lymphatic Filariasis by 2021'.
- Since the launch of the Global Program to Eliminate Lymphatic Filariasis (GPELF) by the World Health Organization in 2000, endemic countries across the world including India have adopted a twin pillar strategy:

- \* Prevention through Mass Drug Administration (MDA) using combination of 2 anti-filarial drugs (DEC and Albendazole)
- \* Providing Morbidity Management and Disability Prevention (MMDP) services to those affected by the disease
- The Government launched the Accelerated Plan for Elimination of Lymphatic Filariasis (APELF) in 2018.
  - \* As per this plan, over 4 billion treatments have been availed by over 630 million target population in endemic districts.
  - \* India has made steady progress in this regard by reducing the infection levels in the community below the threshold level in 96 districts, which accounts for nearly 37% of the total districts.
  - \* The remaining 160 districts pose a challenge.
  - \* Actual consumption of medicines remains low due to low awareness about the benefits of medicines at the community-level leading to non-adherence to treatment.

## 12. WHO India Country Cooperation Strategy 2019–2023

### Context:

- Union Health Minister has launched the WHO India Country Cooperation Strategy (CCS) 2019–2023.

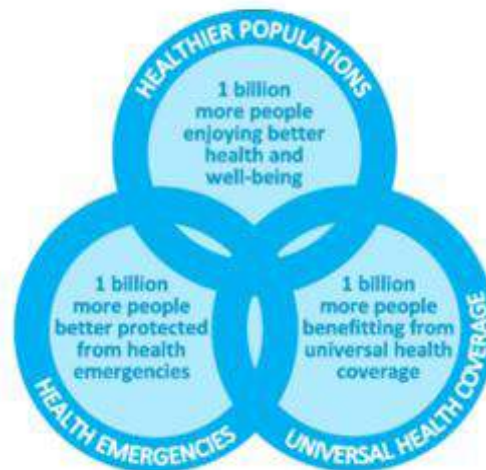
### Details:

- The CCS provides a strategic roadmap for WHO to work with the Government of India towards achieving its health sector goals, in improving the health of its population and bringing in transformative changes in the health sector.
- The four areas identified for strategic cooperation of WHO with the country encompass:
  - \* To accelerate progress on UHC (Universal Health Coverage)
  - \* To promote health and wellness by addressing determinants of health
  - \* To protect the population better against health emergencies
  - \* To enhance India's global leadership in health
- The India CCS is one of the first that fully aligns itself with the newly adopted WHO 13th General Programme of Work and its 'triple billion' targets, the Sustainable Development Goals (SDGs) and WHO South-East Asia Region's eight Flagship Priorities.

### About the WHO 13th General Programme of Work (GPW13):

- GPW13 was adopted by WHO Member States in May 2018.

- It has three interconnected strategic priorities to ensure healthy lives and well-being for all ages
  - \* Achieving universal health coverage
  - \* Addressing health emergencies
  - \* Promoting healthier populations
- The 'triple billion target' is shown in the image below:



## 13. For a happy childhood

### Introduction

- India has over 18% of its population in the age group of 10-17 years of age. The future of the country will be driven by this age group
- But recent surveys have pointed out disturbing trends of Mental Health Disorders in the younger generation

### A look at stats

- According to the National Mental Health Survey of 2016, the prevalence of mental disorders was 7.3% among 13-17-year-olds.
  - \* With many resorting to self-harm, statistics suggest that suicide among adolescents is higher than any other age group.
- According to the Global Burden of Disease Study 1990-2016, in India, the suicide death rate among 15-29-year-olds was highest in Karnataka (30.7), Tripura (30.3), Tamil Nadu (29.8), and Andhra Pradesh (25.0).
- India's contribution to global suicide deaths increased from 25.3% in 1990 to 36.6% in 2016 among women.
  - \* Though suicides among women have decreased overall, the highest age-specific suicide death rate among women in 2016 were for ages 15-29 years and 75 years or older.

### **Issues concerning Mental Disorder**

- Half of all mental health disorders in adulthood starts by 14 years of age, with many cases being undetected.
- Technology has created loneliness, isolation and unrealistic expectations for adolescents in number of cases
- Studies relate suicidal behaviour to absenteeism from school, sexual and/or physical abuse and depression, bullying and peer pressure.
- Overall, a poor social environment and difficulties in discussing problems with parents increase the odds of poor mental health.
- Most are unable to correctly identify approaching mental health professionals as a good solution due to the stigma around mental health issues and lack of understanding of how good support can help them feel and do better.

### **Coping mechanisms**

- Parents and peers can play an important role by being understanding and communicative.
- By moving away from strict rules and diktats, parents should gently discuss the role of technology to bring adolescents to the realisation that limiting screen time and engaging in social activities may improve how they feel.
- By learning more about mental health, parents and school administrations should sensitise themselves about what constitutes 'warning signs' like erratic sleep patterns and mood swings.
- Peer support systems and trained counsellors can encourage dialogue around seeking support

### **Way forward**

- SPIRIT (Suicide Prevention and Implementation Research Initiative) in India, aims to reduce suicides among targeted adolescents and implement research-based suicide interventions.
- They also aim to empower regional policymakers to integrate evidence generated from implemented research on suicide prevention in policymaking.
- India requires multiple similar interventions for change and for disseminating mental health awareness backed by progressive government policies, based on evidence-based approaches.

## **14. 'Cataract major cause of blindness above 50'**

### **Context:**

- The summary report of the National Blindness and Visual Impairment Survey India 2015-2019 has been released by the Union Health Minister at the 13th Conference of Central Council of Health and Family Welfare.

### **Details:**

- The survey was conducted in 31 districts of 24 States.
- Cataract is the leading cause of blindness in people above 50 years, according to the National Blindness and Visual Impairment Survey India 2015-19.
  - \* Cataract-related surgical complications was the second-highest causable factor for blindness with 7.2 per cent cases in people above 50 years, showed the survey.
  - \* Other causes included infectious and non-infectious corneal opacity (scarring of cornea), glaucoma and aphakia (absence of lens in the eye).
- India was the first country to launch the National Programme for Control of Blindness in 1976 to reduce blindness prevalence to 0.3 per cent by 2020.
- But, the estimated prevalence of blindness still stands at 1.99 per cent, severe visual impairment at 1.96 per cent, moderate visual impairment at 9.81 per cent and moderate-severe visual impairment at 11.77 per cent, according to the survey released on October 10, 2019.

### **Findings of the survey:**

- Cataract is the cause for 66.2% cases of blindness, 80.7% cases of severe visual impairment, and 70.2% cases of moderate visual impairment in the age group above 50.
- Blindness is more pronounced among illiterate (3.23%) than literates (0.43%) and more prevalent in the rural population (2.14%) than urban (1.80%).
- Barriers to accessing treatment include:
  - \* No one to accompany [the patient]
  - \* Seasonal preferences
  - \* Financial constraints.
- Financial constraint was found to be the biggest barrier in accessing a cataract surgery with this being a reason for 22.1% blindness cases and lack of awareness was behind 18.4% cases, who did not feel any need of the surgery.
- The World Vision Report released by the World Health Organization (WHO) also pointed out that high costs involved in accessing eye care, especially, for rural populations was a major driver of visual impairment. It called for expansion of Universal Healthcare Coverage and including eye care services in it.
- What makes this worse for India is the fact that approximately 93% of cases of blindness and 96.2% visual impairment cases in this age group are avoidable. Of all the avoidable causes, more than half were treatable.

- India has successfully met the WHO target of 25 per cent reduction from 2014-19 in visual impairment from the baseline level of 2010, the survey found.

#### **National Programme for Control of Blindness and Visual Impairment (NPCB&VI):**

- NPCB&VI was launched in the year 1976 as a 100% centrally sponsored scheme (now 60:40 in all states and 90:10 in NE States).
- It was launched with the goal of reducing the prevalence of blindness to 0.3% by 2020.

### **15. With nine cases a day, Mizoram is top State with HIV prevalence rate**

#### **Context:**

- Mizoram, one of the least populated States in India, reports nine positive cases of Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) a day.

#### **Details:**

- The virus “strike rate” has made Mizoram top the list of States with an HIV prevalence rate of 2.04% followed by two other north-eastern States — Manipur with 1.43% and Nagaland with 1.15%.
- Data compiled by the Mizoram State AIDS Control Society (MSACS) show that 67.21% of the positive cases from 2006 to March 2019 have been transmitted sexually, 1.03% of the transmission route being homosexual.
- The next major cause is infected needles shared by intravenous drug users.
  - \* Mizoram bordering Bangladesh and Myanmar has battled drug trafficking and abuse for a long time.
  - \* Narcotic substances such as methamphetamine and heroin are smuggled in from Myanmar.

#### **Way forward:**

- Focus has to be laid on raising awareness about the virus.
- Greater focus on the treatment and prevention of the disease is the need of the hour.
- The police and the administration must be on high alert to check smuggling of Narcotic substances.

#### **HIV or Human Immunodeficiency Virus:**

- HIV or Human Immunodeficiency Virus is a lentivirus, which is a sub-classification of the retrovirus.
- It causes the HIV infection which over time leads to AIDS or Acquired Immunodeficiency Syndrome.

- AIDS is a deadly condition in which the affected person's immune system fails leading to the spread of life-threatening infections and cancers in his body.
- The average survival period for a person affected with HIV without treatment is nine to eleven years subject to the subtype of HIV.
- HIV infection can occur by the transference of blood, breast milk, vaginal fluid, semen or pre-ejaculate.
- HIV occurs as both free virus particles and as virus inside the infected immune cells within the above-mentioned bodily fluids.

### **16. Central Council of Health and Family Welfare (CCHFW)**

#### **Context:**

- The Union Health Minister Shri Harsh Vardhan inaugurated the 13th Conference of Central Council of Health and Family Welfare (CCHFW) in New Delhi.

#### **Details:**

- Health ministers from 13 states and UTs participated in the event.
- The minister stated that the purpose of the CCHFW meeting was to build a consensus on the national health priorities i.e. Universal Health Coverage (UHC) through Ayushman Bharat, eliminating TB and other priority agenda such as strengthening medical infrastructure.
- A member of the NITI Aayog opined that the two priority areas underscored by the Aayog are:
  - \* Increasing the health budgets by the Centre and the States/UTs
  - \* Enhancing health infrastructure
- The minister also launched ‘Surakshit Matritva Aashwasan (SUMAN)’ for Zero Preventable Maternal and Newborn Deaths, its website and the grievance redressal portal.
- He also released the Report on National Diabetes & Diabetic Retinopathy Survey India 2015-19 and Report on National Blindness & Visual Impairment Survey India 2015-19, because 10th October is also ‘World Sight Day’.
- In addition, the minister also released guidelines on drugs, diagnostic services, biomedical equipment management and maintenance under the Pradhan Mantri National Dialysis Program.

#### **About the Council of Health and Family Welfare:**

- It is an apex advisory body to consider and recommend broad lines of policy in regard to matters concerning health and family welfare.
- The Union Minister for Health & Family Welfare is the Chairperson, while the Minister of State for Health & Family Welfare is the Vice-Chairperson.



- Its first meeting was held in 1988.

#### **About the 'Surakshit Matritva Aashwasan (SUMAN)' scheme:**

- The scheme offers free medicines for pregnant women.
- It aims to bring down the Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR).
- Under this programme, mothers up to 6 months after the delivery and the new born can avail free healthcare benefits including:
  - \* Minimum of four antenatal check-ups
  - \* One check-up during the first trimester
  - \* One check-up during the first trimester
  - \* Olron Folic acid supplementation
  - \* Six home-based new born care visits
  - \* Tetanus Diphtheria injection
  - \* Free transport will be provided from home to the health institutions by the central government
  - \* Referral services will be provided under the scheme with the scope of reaching the health facilities within an hour of critical emergencies
  - \* Zero expenses for C – section facilities

#### **About World Sight Day:**

- This day is observed annually on the second Thursday of October.
- The objective behind this is to steer global focus on blindness and vision impairments.
- This was originally initiated by the Lions Club International in 2000. Since then, it has been integrated with the International Agency for the Prevention of Blindness (IAPB) and the WHO.
- Theme for 2019: Vision First

### **17. Food Safety Mitra (FSM) Scheme**

#### **Context:**

The Union Health Minister launched the Food Safety Mitra (FSM) scheme for strengthening and scaling up the 'Eat Right India' movement.

He also launched the 'Eat Right Jacket' and 'Eat Right Jhola' on World Food Day 2019 (16th October).

About the Food Safety Mitra (FSM) scheme:

- The 'Food Safety Mitra (FSM)' scheme will support small and medium scale food businesses to comply with food safety laws and facilitate licensing and registration, hygiene ratings and training.
- Apart from strengthening food safety, this scheme would also create new employment opportunities for youth, particularly with food and nutrition background.

- An FSM is an individual professional certified by FSSAI who assists in compliances related to FSS Act, Rules & Regulations with three avatars – Digital Mitra, Trainer Mitra and Hygiene Mitra depending upon their respective roles and responsibilities.
- The FSMs would undergo training and certification by FSSAI to do their work and get paid by food businesses for their services

#### **About the 'Eat Right Jacket' scheme:**

- These jackets will be given to the FSSAI field staff to ensure transparent inspection.
- They are embedded with RFID tags and QR codes. It is linked to software to capture entry of inspection staff into premise for monitoring.

#### **About the 'Eat Right Jhola' scheme:**

- The 'Eat Right Jhola' is a reusable, washable and bio-degradable bag.
- These shall replace plastic bags for grocery shopping in various retail chains. Since on repeated use, bags are often contaminated with microorganisms and bacteria, proper and regular washing of cloth bags is essential to ensure safety and hygiene.
- These cloth bags are being provided on a rental basis through a private textile rental service company.

#### **About the 'Eat Right India' Movement:**

- The campaign was launched in 2018.
- The campaign is led by FSSAI.
- It is a Pan-India cycle movement aimed to create consumer awareness about eating safe and nutritious food.
- It aims to engage, excite and enable citizens to improve their health and wellbeing.
- 'Eat Right India' is built on two broad pillars of 'Eat Healthy' and 'Eat Safe'.
- It is a collective effort to make both the demand and supply-side interventions through the engagement of key stakeholders.

#### **About World Food Day:**

- It is celebrated on 16th October every year to mark the foundation of the Food and Agriculture Organisation (FAO) on this day in 1945.
- The day was established in 1979. It has been celebrated every year since 1981.
- This day generates awareness internationally for those who suffer from hunger and to ensure the need for food security and nutritious diets for all. The day emphasises that food is a basic and fundamental human right.
- Theme for 2019: "Our Actions Are Our Future. Healthy Diets for A #ZeroHunger World"



# ART AND CULTURE

## 1. Ajanta Caves

- The Ajanta caves, a Buddhist cave complex in the state of Maharashtra
- In 1819 a British officer for the Madras Presidency, John Smith, while hunting tiger, accidentally discovered the entrance to one of the cave temples
- There are 30 caves carved out of the rock in a semicircular fashion.
  - \* Out of these, five (cave no. 9, 10, 19, 26, and 29) are chaityagrihas and the rest are viharas
- These caves were developed both during Hinayana and Mahayana Phase, but majority of caves were during Mahayana Phase
  - \* Caves of the first (Satavahana) period
  - \* Caves of the later, or Vākā aka, period
- The site is a protected monument in the care of the Archaeological Survey of India
- Ajanta caves is a UNESCO world heritage site
- Chinese Buddhist travelers such as Fa Hien and Huien Tsang have also mentioned about the Ajanta Caves in their memoirs

### Paintings

- The subject matter of these paintings is almost exclusively Buddhist, excepting decorative patterns on the ceilings and the pillars.
- They are mostly associated with the Jatakas, collection of stories, recording the previous births of the Lord Buddha.
- The earliest paintings at Ajanta are in cave No. IX and X of which the only surviving one is a group on the left wall of cave X.
- The painting of Bodhisatva Padmapani from cave I is one of the masterpieces of Ajanta Painting executed in the late 6th century A.D.
- Colours used for the wall paintings were made from pebbles and vegetable found on the hillside.

### Context:

- The cave paintings have started deteriorating in the past few decades because of insects and other climatic factors.

### Details

- The team writes that the most common insects were silverfish, beetles and common bugs.
- Another main problem was the entry of rainwater and water from the Waghura River.

- This leads to dampness in the cave atmosphere causing an increase in algae, fungi, insects, and microbes.
- All these together were changing the original colour of the paintings — white is turning to yellow and blue is becoming green.

### Measures taken

- ASI is presently carrying out precautionary treatments such as spraying of insecticides and herbicides, fixing the loose plaster on cave walls, regular cleaning and use of preservative coating on the painting.

## 2. Audio Odigos

### Context:

- The Ministry of Tourism launches an Audio Guide facility App “Audio Odigos” for 12 sites of India (including Iconic Sites).

### Details:

- Audio guide Odigo offers the Government of India verified content, with visuals & voice over support.
- With this App, tourists can enjoy a more enriching experience and take back historical insights into Indian culture and heritage.
- The Audio Odigos App contains an inbuilt map of the site for smooth navigation during the tour.
- Listeners will be offered various versions of history like synopsis, detailed history and podcasts.
- The audio can be chosen in their preferred language.
- Audio Odigos can be downloaded on all Android and iOS supported mobile phones.

## 3. Bhagat Namdev ji

- Sant Shiromani Namdev Maharaj, also known as Nam Dev, was an Indian poet and saint from Maharashtra.
- Namdev was influenced by Vaishnavism, and became widely known in India for his devotional songs set to music (bhajan-kirtans).
- His philosophy contains both nirguna and saguna Brahman elements, with monistic themes.
- Along with the works of saints such as Jnaneshvar and Tukaram, the writings of Namdev are at the foundation of beliefs held by the Varkari sect of Hinduism.
- Considered the doyen of the Bhakthi movement in India, he spread the message of unity, religious tolerance and harmony.
- Bhagat Namdev's writings were also recognized by the Gurus of Sikhism and are included in the holy book of Sikhism, the Sri Guru Granth Sahib compiled in 1604.

#### **4. Kettukazhcha**

- Kettukazhcha is a spectacular event celebrated at the Ochira Temple in Kollam.
- The festival is said to feature the biggest bull effigies in Asia.
- Bull effigies, symbolising Lord Shiva's vehicle Nandi, are brought to the Oachira Parabrahman temple as part of the Irupathettam Onam festival.

#### **5. Ramlila**

- Ramlila literally translating to Rama's lila or play is any dramatic folk re-enactment of the life of Rama according to the ancient Hindu epic Ramayana or secondary literature based on it such as the Ramcharitmanas.
- Ramlila is a series of scenes that include song, narration, recital and dialogue.
- It particularly refers to the thousands of – Hindu god Rama-related dramatic plays and dance events that are staged during the festival of Navratri.
- After the enactment of the legendary war between Good and Evil, the Ramlila celebrations climax in the Dussehra (Dasara, Vijayadashami) night festivities where the giant models of Evil such as of demon Ravana are burnt, typically with fireworks.
- The Ramlila festivities were declared by UNESCO as one of the "Intangible Cultural Heritage of Humanity" in 2008.

#### **6. Urdu is an Indian language, not a foreign language**

##### **Context:**

- Recently Punjab University, Chandigarh, had proposed to merge Department of Urdu language with school of foreign languages to be set up after merging departments of French, Russian, German, Chinese and Tibetan.

##### **What is the origin of Urdu Language?**

- According to the Urdu Language experts, the origin of Urdu language had taken place in India several centuries back
- Historical references indicate that origin of Urdu had taken place in Punjab state of India and the great poet Ameer Khusro, in his book 'Ghurrat-ul- Kamal' had written that Masood Lahori (Masood Saad Salman), a renowned poet who was born in Lahore in 11th century) had composed poetry in Hindvi (Urdu), which is also called Dehlavi.
  - \* Urdu was familiar with other names including Hindustani, Hindavi and Rekhta.
- This shows that Urdu was very much originated from Punjab as Lahore was the part of greater Punjab only before partition.

- The subject, object, auxiliary, verb, grammar, tenses of Urdu are very much Indian and like the Hindi language even if it has derived some root words from Persian and Arabic languages then they were changed into Urdu language in India

##### **How it got developed and flourished and where?**

- As per the historical references after its origin in Punjab, Urdu got developed and flourished in Delhi along with part of Haryana state and some states in South where it was developed in the form of 'Dakhni (Deccani) language'.
- Historians say that it had developed and flourished in Delhi during the period of 'Delhi Sultanate' from 12th to 16th century and then during the period of 'Mughal Empire' in Delhi from 16th century to 19th century when several court poets used this language in their great poetry and writings. And then it was also developed in Deccan states.

##### **What is its connection with Deccan India?**

- When Delhi Sultanate and then Mughal Empire spread its wings towards the Deccan, Urdu speaking people of Delhi spread the language in South where it got developed and flourished in Dakhan (Deccan) states mainly in Karnataka, nowadays Telangana, part of Kerala and Tamil Nadu and Maharashtra.
- During Bahamani Sultanate in Deccan from 14th to 16th century mainly in Maharashtra, Karnataka and Telangana, Urdu got flourished a lot as several scholars, who were the part of Deccan Sultanate used Urdu and local words which further got spread in other parts like Ahmednagar, Bijapur, Bidar and Golkonda

##### **What is Urdu's official status in India?**

- It is one of the officials' languages under the Constitution of India, it is among the 15 Indian Languages written on the Indian Currency notes.
- It is one of the official languages in states like Kashmir, Telangana, UP, Bihar, New Delhi and West Bengal.

#### **7. Bhaona**

- Bhaona is a traditional form of entertainment, always with religious messages, prevalent in Assam. It is a simple drama which shows the victory of truth at the climax, generally using fictitious or mythological kings, queens, demons, Gods, soldiers, etc.
- The history of Assamese drama begins with the plays of Mahapurusha Srimanta Sankardeva written in the early sixteenth century.
- The form of religious school established by Sankardeva is called Eksaran Bhagawati Dharma (literally meaning religion of devotion to single God).
- Bhaona was created by Sankardeva. He himself wrote seven dramas (called Onkia Naat) for performance in Bhaona.

- Later, many of his followers also wrote numerous dramas for Bhaona.
- These plays are popularly known as Ankiya Nats (one-act play) and their staging is known as bhaona.
- In Bhaona, men and women playing the roles of different characters speak dialogues in Brajawali often in lyrical form which is also created by Sankardeva he used this special language in Bhaona because the Sanskrit, which was the original language used in the Hindu religious texts, was difficult for common people.

## 8. Lakshmi Narasimha Temple

- The temple is located in Bhadravati taluk in the Shimoga District of Karnataka state.
- The temple was built during the Hoysala rule in the early 13th century.
- The temple is a 'trikuta' — a temple with three shrines (Vimana) — dedicated to deities Lakshmi Narasimha, Venugopalaswamy, and Purushothama.
- The basic building material being Soapstone.
- The temple stands on a jagati and the outer wall exhibits a two-tier decorative plan.

### Hoysala Temple Architecture:

- Hoysalas grew into prominence in South India after the Chola and the Pandya power declined.
- Their chief temples are at Belur, Somnathapuram and Halebid.
- These temples have a plan called the stellate plan. This is because of the plan which emerged from being a straightforward square to a complex one with many projecting angles began to resemble a star.
- The star-like ground plan is a distinct feature of Hoysala architecture. The style is Vesara.
- They are made of soapstone which is relatively soft. This is believed to have enabled the artists to carve intricate details like jewellery.

### Context:

- Lakshmi Narasimha temple in Bhadravati had that developed leaks after the rains.

## 9. Vishwa Shanti Stupa

### Context:

- The President of India addressed the commemoration of Golden Jubilee of Vishwa Shanti Stupa in Rajgir, Bihar

### Vishwa Shanti Stupa:

- Vishwa Shanti Stupa or the World peace pagoda constructed atop the Ratnagiri Hill is the world's highest peace pagoda.
- It was conceptualised by renowned Buddhist monk Nipponzan Myohoji and built by Japanese monk Fujii Guruji.

- The stupa is built completely with marble.
- It comprises of four golden statues of Lord Buddha with each representing his life periods of birth, enlightenment, preaching and death.
- In 1965, the then President Dr Radha Krishnan had laid the foundation stone for this stupa, which was eventually inaugurated by President V V Giri in 1969.

### Shanti Stupas:

There are 7 Shanti Stupas in India, other famous Stupas are Global Vipassana Pagoda Mumbai, Deekshabhoomi Stupa Nagpur and Buddha Smriti Park Stupa Patna.

### Rajgir:

- The city of Rajagriha (present day Rajgir) was the first capital of the kingdom of Magadha, a state that eventually evolved into the Mauryan Empire.
- It was the ancient capital city of the Magadh rulers until the 5th century BC when Ajatashatru moved the capital to Pataliputra.
- Rajgir is also known as Panchpahari as it is surrounded by five holy hills.
- The first Buddhist Council, immediately after the Mahaparinirvana of Lord Buddha, was convened at this place (Rajagriha) which presently is called Rajgir. It was held under the patronage of king Ajatashatru with the monk Mahakasyapa presiding over the council.
- It was at the Gridhakuta, the hill of the vultures, where Buddha made Mauryan king Bimbisara convert to Buddhism.
- The legend has it that the ancient city Rajagriha existed even before Lord Buddha attained enlightenment.
- Rajgir is sacred to memory of the founders of both the religions: Buddhism as well as Jainism.
  - \* It was here that Gautam Buddha spent several months meditating and preaching at Gridhakuta.
  - \* Lord Mahavira spent 14 years of his life at Rajgir and nearby areas, spending chaturmas (four months during monsoon) at a single place in Rajgir and the rest in the places in the vicinity. It is an important religious place for Jains.

## 10. Rashtriya Sanskriti Mahotsav

- The festival began in 2015. It showcases the rich cultural heritage of India. It includes classical and contemporary handicrafts, painting, arts-folk, sculpture, etc. It covers the fusion of folk art forms from 22 states and will offer the best chance to experience the emerging virtuosity.
- For Five years consistently, the festival has been receiving continuous acclaim for playing a major role to effectively connect the conglomeration of state audiences to the rich, diverse and undiscovered culture of India under the umbrella of Ek Bharat Shreshtha Bharat.

- The festival brought together more than 400 performers to perform over various folk dance forms and showcased handicrafts created by master craftsmen from all over India clubbed with, diverse cuisines prepared by traditional chefs, all under one-roof.

#### **Significance of the Mahotsav**

- The aim is to promote the engagement of different states and UTs to enhance mutual understanding and bonding between people of diverse culture.
- This will secure stronger unity and integrity of India.

#### **11. Thotlakonda Buddhist Monastery**

- Thotlakonda Buddhist Complex is situated in Vishakapatnam in Andhra Pradesh. It is a dwelling of various Stupas, Viharas and Chaityas.
- The name Thotlakonda is derived from the presence of a number of rock-cut cisterns hewn into the bedrock of the hillock.
- After its discovery, major excavations have been conducted by the Andhra Pradesh State Archaeology Department.
- The excavations established the existence of a Hinayana (Theravada) Buddhist complex which flourished 2000 years ago.
- The excavations reveal Satavahana dynasty lead and Roman silver coins indicating foreign trade; terracotta tiles, stucco decorative pieces, sculptured panels, miniature stupa models in stone, and Buddha footprints were also found.
- The excavations also yielded twelve inscriptions in the Brahmi script.
- Thotlakonda was well within the influence of ancient Kalinga, which was an important source of dissemination of Buddhism to Sri Lanka and various parts of Southeast Asia.
- It provides an insight into the process of transoceanic diffusion of Indic culture, especially Buddhism.

# GEOGRAPHY

## 1. Scientists excavate 'Ancient River' in Uttar Pradesh

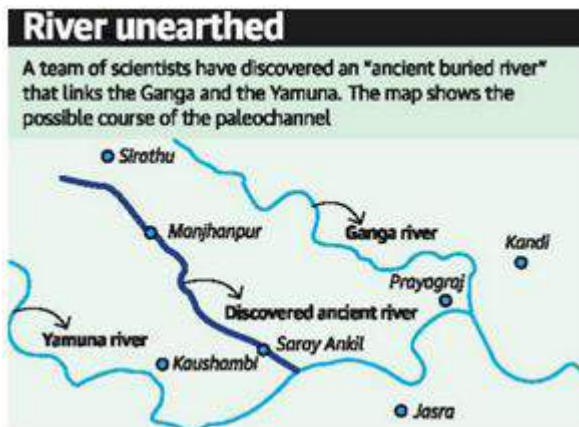
### Context

- The Union Water Ministry has excavated an old, dried-up river in Prayagraj (formerly Allahabad) that linked the Ganga and Yamuna rivers.

### What is a Paleochannel?

- It is a remnant of an inactive river or stream channel that has been filled or buried by younger sediment.
- They reveal the course of rivers that have ceased to exist.

### Details:



- The discovery was made by a team of scientists from the CSIR-NGRI (National Geophysical Research Institute) and the Central Groundwater Board during a helicopter-borne geophysical survey covering the Prayagraj and Kaushambi region in Uttar Pradesh.
- The "Ancient Buried River" is around 4 km wide, 45 km long and consisted of a 15-metre-thick layer buried under the soil.
- A report that followed the genesis of the palaeochannel's discovery concluded that evidence from palaeochannels suggested that the mythological Saraswati River did indeed exist.
- The conclusion is based on reports and maps of palaeochannels in north India and a separate, ongoing project by the Central Groundwater Board to map the aquifers (extremely deep stores of groundwater) of India.

### Significance of the discovery:

- According to officials at the National Mission for Clean Ganga (NMCG), the aim is to develop it as a potential groundwater recharge source.
  - \* NMCG is a body under the Union Jal Shakti Ministry that coordinates the cleaning of the Ganga.
- Knowledge on subsurface connectivity between Ganga and Yamuna rivers will play a very crucial role in planning of Ganga cleaning and protecting safe groundwater resources.

## 2. The secondary monsoon: On rainfall behaviour

### Context

- The Southwest monsoon finally commenced its withdrawal. With this, the 2019 monsoon has remained the longest season ever, with the retreat being termed as the most delayed one to commence over India.

### Southwest and Northeast Monsoon in India

- The NE monsoon rains contribute about 20% of India's annual rainfall and span October-December.
- The Southwest Monsoon has been studied for centuries. It has well established correlations — for instance, temperatures in the Central Pacific, or land surface air temperature in north-western Europe — between them as well as the quantity and distribution of monsoon rainfall, no such determining parameters exist for the NE monsoon.

### What prompts the withdrawal of the monsoon every year?

- Normally, the monsoon withdrawal begins from extreme northwest parts of the country, covering Rajasthan and Punjab, around September 1 and reaches central India states such as Maharashtra by October 1, with the changeover from cyclonic to anticyclonic conditions.
  - \* This change is caused by the Earth's rotation and the relative position of the Sun.
- The withdrawal of the monsoon begins with the development of a high-pressure area over northwest India.
  - \* High-Pressure Zones represent settled weather and low wind movement, whereas intense Low-Pressure Zones attract moisture-bearing winds and therefore host weather disturbances like rains, thunderstorms or lightning.



- \* This year (2019), the presence of multiple low-pressure weather systems over the subcontinent, especially northern and western India, prevented the timely formation of high pressure (i.e. anticyclonic) conditions essential for the rains' withdrawal.
- The weather agency declares monsoon withdrawal generally when an anticyclonic circulation is formed over northwest India with significant reduction in the moisture levels over the region and a reduction in rainfall over the region for at least five consecutive days.
- However, this year(2019), the withdrawal was highly delayed owing to the monsoon getting re-activated and both the Arabian Sea and the Bay of Bengal pumping-in moisture to the mainland.
  - \* Though, the withdrawal features seemed to appear from time-to-time, none persisted long enough.
  - \* Besides, very severe cyclonic storm, Hikka too, was formed in the Arabian Sea towards the fag end of the season which contributed to moisture incursion over Kutch, Saurashtra and Maharashtra.
  - \* Another cyclonic circulation, that originated in the Bay of Bengal, caused widespread rainfall over Bihar and Uttar Pradesh

#### Similar incidents in the past

- The most delayed withdrawal in the past years has been recorded in 1961 [1st October 1961], followed by 30th September in 2007.

#### Stats

- Monsoon rains in south India have been 15% above normal.
- In Andhra Pradesh, Telangana, Karnataka, Kerala and Tamil Nadu, where the Central Water Commission monitors over 30 reservoirs, their water levels were 44.2 billion cubic metres, or 84% of their total live capacity, and much higher than the 10-year average of 66%.
- According to the IMD, North and Western Indian states have collectively received 160% excess rainfall in the period from October 1 to October 6, 2019.
- In Rajasthan alone, the excess rain has been over 4 times the normal. This is indicative of the lingering low-pressure that has delayed the monsoon's withdrawal.

This means that excessive rains could contribute to the saga of urban inundation.

#### Irregularity in monsoon and lack of fixed model

- Among the signatures of Global Warming is intense rainfall being concentrated over short spells and pockets and long periods of drought.
- The El Niño phenomenon, which has been linked to the abnormal warming of the equatorial waters off the central and eastern Pacific, has been connected with the failure of the southwest monsoon.

- \* However, researchers over the years have noted that this had an opposite effect on the NE monsoon leading to more voluminous showers in the winter and particularly over South India.
- This summer, the IMD, along with other meteorological agencies around the world, bet that monsoon rains would be on the lower side due to the possible emergence of an El Niño.
  - \* Even after the threat of El Niño had waned, it didn't indicate that rains would be torrential in August and September.
  - \* Conditions in the Indian Ocean turned favourable and led to the excessive monsoon activity in 2019.
- This shows that there is a paucity in understanding the behaviour of the Indian Ocean and its influence on the monsoons.
- India is moving to a system where Dynamical Models that run on powerful computers will become the mainstay of monsoon forecasting.
  - \* However these too are heavily reliant on the behaviour of the Pacific Ocean and El Niño-related swings.

#### Way forward

- India needs to step up research to improve the performance of these models.
- With climate change set to inescapably alter the ocean temperatures around the Indian neighbourhood, giving more importance to understanding the vagaries of the NE monsoon ought to be among India's key prongs to adapting to climate change.

# EDUCATION

## 1. NEET Examination Scam

### Context

- A student in a medical college in Tamilnadu had gained his seat through subterfuge — by having someone impersonate him at the NEET

### Details

- It is a case of impersonation in National level Entrance cum Eligibility (NEET) test
- It was operated with the help of middlemen to hire a medical student to write the test for the candidate, for a hefty consideration.
- This was a careful web of deception, right from submitting photos of the impersonator in the NEET application forms, to actually appearing for the examinations and single-window counselling for admissions, to submitting the application with the original student's photo at the allotted college.
- Further probe cast a shadow on the admission of more students, including in private medical colleges.
- It is evident that fraud has been committed, and serious lapses in procedures and processes were exploited by students eager to score a medical seat by hook or by crook.

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Given that NEET was intended to standardise testing for admission into medical colleges and ensure a certain minimum quality, such lapses erode the very core of its raison

### Steps to be taken

- The Ministry of Health and Family Welfare and the National Testing Agency, which conducts the examination, must exhibit zero tolerance to such attempts to frustrate the integrity of the test.

- Both these agencies must immediately set their energies to identifying lacunae in the existing system and ensure that a foolproof testing methodology is in place.
- Using biometrics to identify students taking NEET has been suggested, and its value in adding a further layer of checks and balances is indisputable.
- Parents and students too would do well to temper their vaulting ambition for an MBBS seat with a measure of rationality. There are only a limited number of MBBS seats available, and while that number is slowly growing, it will never equal the demand.

## 2. School Education Quality Index (SEQI)

- It was developed to evaluate the performance of States and Union Territories (UTs) in the school education sector.
- The index aims to bring outcomes focus to education policy by providing States and UTs with a platform to identify their strengths and weaknesses and undertake requisite course corrections or policy interventions.
- In line with NITI Aayog's mandate to foster the spirit of competitive and cooperative federalism, the index strives to facilitate the sharing of knowledge and best practices across States and UTs.

### Aim and Purpose

- SEQI aims to drive policy reforms that will improve the quality of school education. The index seeks to institutionalise a focus on enhancing education outcomes by driving improvements in learning levels, access, equity, infrastructure and governance processes.
- The index recognises that school education is a subject on the Concurrent List and that State-level leadership is crucial for improving outcomes in a cost-effective manner. The index will serve as a regular and transparent review of the status of school education quality across the States and UTs.

### Index categories and Domains

- SEQI is based on a set of indicators that measure the overall effectiveness, quality and efficiency of the Indian school education system.
- The index encourages States/UTs to improve their scores by showing progress across these aspects.

Category	Domain	Number of indicators	Total weight
1. Outcomes	1.1 Learning Outcomes	3	360
	1.2 Access Outcomes	3	100
	1.3 Infrastructure & Facilities for Outcomes	3	25
	1.4 Equity Outcomes	7	200
2. Governance Processes Aiding Outcomes	Covering student and teacher attendance, teacher availability, administrative adequacy, training, accountability and transparency	14	280
<b>Total</b>		<b>30</b>	<b>965</b>

### Context

- The first edition of SEQI was released by Vice-Chairman, NITI Aayog

### Details

- To facilitate a like-for-like comparison, States and UTs have been grouped as Large States, Small States and UTs.
- Within each of these groups, the indicator values have been appropriately scaled, normalized and weighted to generate an overall performance score and ranking for each State and UT.

### Ranking of States

- Among 20 large States, Kerala was the best performer with a score of 76.6%, while Uttar Pradesh came in last with a score of 36.4%.
  - \* Rajasthan and Karnataka clinched the top second and third spots in the overall performance rankings.
  - \* The other Large States perform better on the Governance Processes Aiding Outcomes category, with the most noticeable performance differences observed in the cases of Odisha, Punjab and Haryana.
- Among smaller States, Manipur emerged as the best performer.
  - \* Sikkim is the only Small State that performs better on the Governance Processes Aiding Outcomes category.
- Chandigarh topped the list of Union Territories.
- Haryana, Assam and Uttar Pradesh showed the most improvement in their performance in 2016-17, in comparison to the base year of 2015-16.
  - \* Tamil Nadu was the top performer in access and equity outcomes.
  - \* Karnataka led in learning outcomes.
  - \* Haryana had the best infrastructure and facilities.

### Concerns

- West Bengal refused to participate in the evaluation process and has not been included in the rankings.
- The findings point out huge differences in the quality of school education across the country.

## **3. Tenure Track System (TTS) in IIT's**

### Context

- Aligning themselves with global peers, Indian Institutes of Technology (IITs) will now hire faculty on 5-6 year contract as against the current practice of making hires permanent after a one-year probation period.
- At the end of the contract, based on a review of their teaching and research, the said faculty will either be retained and promoted as tenured faculty or find their contract annulled.

### How does it work?

- All entry-level teachers in Indian Institutes of Technology — will join only as contractual teachers for five and half years and their positions will be confirmed as associate professors only if their performance is found to be “satisfactory.”
  - \* Under this system, an Assistant Professor may be hired without the mandatory post-PhD experience requirement
- Based on an evaluation by an external committee at the end of 5.5 years, he or she may either be granted tenure (made permanent) and promoted to the next higher level of associate professor or asked to leave.
- In certain cases, based on the recommendation of the external committee, an extension of two years may be granted to the candidate before being assessed again.

### Why this move would be important?

- At present, a fresh faculty member is placed on probation for a year before confirmation without being subjected to any kind of a critical evaluation.
- According to the Council, this leads to a situation wherein “a large number of faculty, despite having very good credentials, do not put in enough effort on research and teaching”.
- Over the years, the number of faculty whose performance is below par has risen to such an extent that “more than half” underperform.
- The Tenure Track System is being seen as a silver bullet to prevent further deterioration and to remove non-performers.
- The tenure track combines academic freedom with responsibility and accountability

### **Issues with TTS**

- While the existing faculty will continue to function as permanent faculty under the older system, the new tenure tracking system will apply for fresh hires. Flogging a small subset of young faculty to improve the metrics using the threat of tenure track while leaving the large majority of senior faculty unmonitored will do little to achieve the prime objective.
- Keeping the young faculty on a tight leash can prove to be counterproductive. To begin with, the power asymmetry that already exists between new recruits and the older faculty will worsen. But tenure's biggest disservice may be in the field of research. With constant pressure over their heads, young faculty may end up being more risk-averse and refrain from working in unchartered, cutting-edge research areas.

### **Major Problems haunting the institutions**

If introduction of TTS is a must to bring accountability in the system it has to be simultaneously matched in terms of research facilities. Any adaptation of US principles into our education system will be a futile exercise if basic facilities are unmet.

- Unlike in most U.S universities that have a tenure track system, it is extremely difficult for new appointees to hit the ground running as even basic infrastructure to carry out research is not in place at many of the newer IITs.
- There have been innumerable cases in the older IITs where even securing lab space can take as long as a year or more.
- While those working in theoretical areas might find it relatively easier to publish papers, experimentalists will be at a greater disadvantage as setting up labs will take longer. Added to this lack of good computer science faculty and failure to recruit people with relevant skill set is another major impediment.
- While the older IITs provide seed funding of about ₹20 lakh, the new IITs provide just a couple of lakhs of rupees. Researchers will necessarily have to turn to funding agencies for grants.
  - \* With a significant reduction in the number of research proposals getting funded, new faculty will be forced to compete with well-established researchers for a piece of the pie.
  - \* The delay in disbursal of funds by agencies is another problem.
- The biggest area of concern is the upper age limit of 35 years for an assistant professor's post, which is not the case in the U.S. Since assistant professors are in the early 30s when they secure a position

- It is also unclear if the new IITs, which are just being built, will find themselves at a disadvantage in attracting talent.
- At this stage, one can only hope that the IIT Council has deliberated on these critical issues and not acted in haste or under duress.

### **Conclusion**

- The introduction of the tenure track system without addressing the underlying problems researchers face is likely to make it even more challenging to find good talent.

# DISASTER MANAGEMENT

## 1. Bihar Rain

### Context

- Heavy rain and acute waterlogging disrobed life in the state of Bihar leading to loss of lives and property.

### Impact

- The rain has affected the movement of trains, road traffic as well as flight operations.
- The flood water has also entered houses, shops and hospitals at many places in the state.
- Electricity, phone connection, Internet was down in few regions

### Lack of administrative preparedness

- If Bihar is struggling to stay afloat in the ongoing monsoon, its distress can be traced to poor infrastructure and apathy of officials in disaster management.
- Indian cities are investing in several spheres of infrastructure but with limited scope and not matching it up with capacity building
- Ignoring urban planning and adaptation has proved to be costly, and losses are sapping the vitality of the economy.
- Dealing with the changing contours of the monsoons would, however, require coordination between weather authorities and state governments.
  - \* For instance, authorities in Bihar were not prepared in spite of the red alert issued by the met department.
  - \* Moreover, the drainage systems of most Indian cities are ill-equipped to withstand this change in precipitation patterns.
- Patna was paralyzed without power and communication and the State government tried to drain its streets of water, and critical rations were distributed by boat and helicopter.

### Way Forward

- India's cities should work towards solutions that use engineering and ecology to contain the excess water from rain and put it to good use. This could be in the form of new lakes and bioswales, which are vegetated channels to manage rainwater.
- States should be able to find financial and technical linkages to put up flood-handling structures.
- In Bihar's case, coordination with Nepal to track monsoon flows is also vital, since big Gangetic Rivers originate in the Himalayan region.

### Conclusion

- So going forward the state missionary and administration must focus on ensuring the safety of citizens and durability of economic assets



# GOVERNANCE

## 1. **'FASTags will work as Aadhaar to track vehicles'**

### **Context:**

- The government has announced that FASTags will be mandatory for all vehicles on all National Highways from December 1, 2019.

### **Details:**

- Union Minister of Road Transport and Highways has appealed to all the States to adopt the technology so that the entire system could come under the National Electronic Toll Collection programme of the Ministry.
- National Highway Authority of India operates FASTags on Electronic Toll Collection System.

### **How does FASTag work?**

- A FASTag uses Radio Frequency Identification technology to make cashless payments through a prepaid account linked to it.
- The tag is fixed to the windscreen of a vehicle and an RFID antenna in the canopy of the toll gate scans the QR code and the tag identification number, following which the boom barrier lifts to allow a vehicle to pass through it without the need for a vehicle to stop.
- A FASTag is linked to a bank account.
- When a vehicle passes through a toll, an SMS with date, time and place of transaction will be sent to the owner of the vehicle.
- The master data of all transactions will be with the concessionaire of the toll booth concerned, along with the bank with which the owner has registered the FASTag and the National Payments Corporation of India.

### **RFID:**

- Radio-frequency identification (RFID) is the use of a wireless non-contact system that uses radio-frequency electromagnetic fields to transfer data from a tag attached to an object, for the purposes of automatic identification and tracking.

### **Benefits of FASTags:**

- FASTags facilitate seamless travel.
- They facilitate quick checkout of the vehicles from the toll lanes.
- They help in avoiding long queues at toll booths and hence reduce waiting time.
- Cameras at toll booths will take photos of passengers in a vehicle, which will be useful for the Ministry of Home Affairs as there will be a record of a vehicle's movement.

- It is likely to reduce the nation's GDP loss by bringing down loss of fuel while waiting at toll plazas.

## 2. **'Mo Sarkar' initiative launched**

### **Context:**

- The Odisha government has launched a new governance initiative 'Mo Sarkar' on the occasion of Gandhi Jayanti.

### **What is Mo Sarkar?**

- "Mo Sarkar" literally translates to "My Government".
- Under the programme, feedback will be collected on government officers from public.
- The ministers would dial common citizens to seek feedback on the kind of response they get during recent visits to police stations and district headquarters hospitals (DHH).
- The state government will collect feedback on the behaviour and professionalism of government officers. The government employees will be incentivised or action will be taken against them, based on the feedbacks.
- All of these government officers will then be graded on the basis of feedback received from people.

### **Details:**

- The "Mo Sarkar" initiative is an important transformative move under the 5T programme introduced by Chief Minister of Odisha.
- The 5Ts aim at achieving progress through Transparency, Teamwork, Technology, Time and Transformation.
- This is the first such type of programme in the country.
- Any government employee found guilty of misbehaviour or any other wrongdoing will face strict punishment.

## 3. **RTI- NGOs getting 'substantial' government grant fall within: SC**

### **Context:**

- The Supreme Court in D.A.V. College Trust and Management Society Vs. Director of Public Instructions held that non-governmental organisations which were substantially financed by the appropriate government fall within the ambit of 'public authority' under Section 2(h) of the Right to Information Act, 2005.

### Section 2(h) of the Right to Information Act, 2005

(h) "Public authority" means any authority or body or institution of self-government established or constituted,—

- a) a. by or under the Constitution;
- b) b. by any other law made by Parliament;
- c) by any other law made by State Legislature;
- d) by notification issued or order made by the appropriate Government, and includes any
  - \* i. body owned, controlled or substantially financed;
  - \* ii. non-Government Organisation substantially financed, directly or indirectly by funds provided by the appropriate Government

### What did the Supreme Court say?

- In D.A.V., the top court held that 'substantial' means a large portion which can be both, direct or indirect.
- It need not be a major portion or more than 50% as no straitjacket formula can be resorted to in this regard.
  - \* For instance, if land in a city is given free of cost or at a heavily subsidised rate to hospitals, educational institutions or other bodies, it can qualify as substantial financing.
  - \* However, it said whether an NGO or body is substantially financed by the government is a question of fact which has to be determined on the facts of each case as there may be cases where the finance is more than 50% but still may not be called substantially financed.
- The court resorted to 'Purposive' Interpretation of the provisions by underscoring the need to focus on the larger objective of percolation of benefits of the statute to the masses.
  - \* The purposive approach to statutory interpretation seeks to look for the purpose of the legislation before interpreting the words.
  - \* To understand the meaning of words in a statute, Courts have to understand the statute's intent. The purpose of an Act, i.e. why it was enacted and how it came to be

### Political Parties and RTI

- In 2010, the Association for Democratic Reforms (ADR) filed an application under the RTI to all national parties, seeking information about the "10 maximum voluntary contributions" received by them in the past five years.
  - \* None of the national political parties volunteered to disclose the information. Consequently, ADR and RTI activist Subhash Agarwal filed a petition with the Central Information Commission (CIC).
- In 2013, a full bench of the CIC delivered a historic judgment by declaring that all national parties came under 'public authorities' and were within the purview of the RTI Act.

- \* Accordingly, they were directed to designate Central Public Information Officers (CPIOs) and the appellate authorities at their headquarters within six weeks.

- In 2013, The Right to Information (Amendment) Bill was introduced in Parliament to keep political parties explicitly outside the purview of RTI that lapsed after the dissolution of the 15th Lok Sabha.
  - \* Notwithstanding the binding value of the CIC's order under Section 19(7) of the Act, none of the six political parties complied with it.
  - \* Quite interestingly, all the parties were absent from the hearing when the commission issued show-cause notices for non-compliance at the hearing.
- Finally, in 2019, a PIL was filed in the Supreme Court seeking a declaration of political parties as 'public authority' and the matter is sub judice.

Irrespective of the ideological differences among these political parties on almost all the issues under the sun, non-compliance of the RTI mandate has been a great unifier.

### Drawing an analogy between the Supreme Court's judgment on D.A.V. and the political parties' issue

- It can be argued that national parties are 'substantially' financed by the Central government.
- The various concessions, such as allocation of land, accommodation, bungalows in the national and State capitals, tax exemption against income under Section 13A of the Income Tax Act, free air time on television and radio, etc. can easily satisfy the prerequisite of Section 2(h) of the RTI.
- If an entity gets substantial finance from the government, there is no reason why any citizen cannot ask for information to find out whether his/her money which has been given to the entity is being used for the requisite purpose or not.

### On Accountability

- Applying the purposive rule of interpretation which is discernible from the preamble of the RTI Act, the ultimate aim is the creation of an 'informed' citizenry, containment of corruption and holding of government and its instrumentalities accountable to the governed.
- The Law Commission opines that political parties are the lifeblood of our entire constitutional system.
  - \* Political parties act as a conduit through which interests and issues of the people get represented in Parliament.
  - \* Since elections are predominantly contested on party lines in our parliamentary democratic polity, the agenda of the potential government is set by them.

- As noted by Dr. B.R. Ambedkar in his famous Constituent Assembly speech, "The working of a Constitution does not depend wholly upon the nature of the Constitution. The Constitution can provide only the organs of State...The factors on which the working of those organs of the State depend are the people and the political parties they will set up as their instruments to carry out their wishes and their politics."

#### **Conclusion**

- Let's hope the top court will further the positive advances made in this direction and our political parties who tirelessly claim themselves to be apostles of honesty and integrity walk the talk.

### **4. Village Secretariat System**

#### **Context**

- Andhra Pradesh Chief Minister inaugurated the 'Village Secretariat system' which aims to strengthen the village ecosystem.

#### **How does it work?**

- One Village Secretariat has been set up for every population of 2,000, with each one comprising close to a dozen village officials (from different departments like police, revenue, etc).
- The idea behind it, according to the state government, is to ensure that its services reach people on the ground, and also to strengthen the existing Panchayat Raj system.

#### **Significance**

- These institutions would act as a bridge between the government and the people by rendering over 500 types of services at their doorstep.
- It is opined that the bribing culture prevalent, to get ration cards or pensions or to avail any welfare scheme would be a thing of the past when the village and ward secretariats start functioning in a full-fledged manner from January 1, 2020.

#### **Issue Area**

- The system is in complete contrast to the earlier trajectory of the state, which had been pushing for e-governance or online services instead under the former chief minister.
- The previous government had launched the e-Pragati platform, bringing many of the state government's services online, in partnership with EY Consultancy.
- The e-Pragati programme enabled citizens to avail over 745 services from 34 departments and 336 autonomous organizations of the AP government online.

### **5. National Panchayat Awards 2019**

- The Best performing Panchayats were selected based on various criteria and indicators.

- This incentivization encourages Panchayat representatives who make special efforts; creates models for other Panchayats and Gram Sabhas to follow and focuses public attention on Panchayats' performance, which encourages all Panchayats to improve their performance. Finally, this creates an eco-system for overall good governance at the local level.

- The awards were given under five categories:

- \* Deen Dayal Upadhyay Panchayat Sashaktikaran Puraskar (DDUPSP): Given to best performing Panchayats (District, Intermediate and Gram) in recognition of the good work done for improving the delivery of services and public goods.
- \* Nanaji Deshmukh Rashtriya Gaurav Gram Sabha Puraskar (NDRGGSP): Given to Gram Panchayats for their outstanding contribution to the socio-economic development by involving Gram Sabhas.
- \* Gram Panchayat Development Plan (GPDP) Award: Given to best performing Gram Panchayats which have developed their GPDPs according to the State/UT specific guidelines prepared in line with the model guidelines issued by Ministry of Panchayati Raj.
- \* Child-friendly Gram Panchayat Award: Given to best performing Gram Panchayats/Village Councils (VCs) (one in each State/UT) for adopting child-friendly practices.
- \* e-Panchayat Puraskar: Given to States/UTs or promoting e-enablement of PRIs for bringing in efficiency, transparency and accountability in their functioning.

#### **Gram Manchitra:**

- A Spatial Planning Application called 'Gram Manchitra' was launched on the occasion.
- Gram Manchitra is a Geo-Spatial based decision support system for the panchayats.
- The panchayats can utilize this App to plan, develop and monitor developmental activities on real-time basis.

#### **Context:**

- Out of the 2.5 lakh panchayats in the country, 240 panchayats were conferred the National Panchayat Awards 2019 by the Union Minister for Panchayati Raj in New Delhi.

### **6. SARAS Aajeevika Mela Inaugurated**

#### **Context:**

- Union Minister of State for Rural Development inaugurated SARAS Aajeevika Mela.

### **About the Mela**

- SARAS Aajeevika Mela is an initiative by the Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM) and Ministry of Rural Development (MoRD).
- The objective of this initiative is to bring the rural women Self Help Groups (SHGs) formed with the support of DAY-NRLM, under one platform to showcase their skills, sell their products and help them build linkages with bulk buyers.
- Through participation in SARAS Aajeevika Mela, these rural SHG women get vital national level exposure to understand the demand and taste of urban customers.
- The Mela is organised by the marketing arm of the Ministry, Council for Advancement of People's Action and Rural Technology (CAPART).
- Workshops for the rural SHG women would be conducted during the Mela, which will help them to enhance their knowledge and sharpen their skills in bookkeeping and GST, product design, packaging, marketing/e-marketing, communication skills etc.

# MISCELLANEOUS

## 1. Fit India Plog Run

### Context

- The Sports Ministry organized the Fit India Plog Run, a dual initiative of creating a clean and fit India, in a tribute to Mahatma Gandhi on his 150th birth anniversary.

### Plogging

- Plogging involves picking up plastic and other waste from the surroundings while jogging
- It started in Sweden in 2016 and spread to other countries.
- Plogger Ripu Daman Behlvi started the concept in New Delhi, which then spread to the rest of the country.

## 2. Military Nursing Service (MNS) Raising Day

### Context

- The 94th Military Nursing Service Raising Day was celebrated on 1st October 2019

### Details

- The MNS is the only all-women corps in the Armed Forces in India. It is a part of the Armed Forces Medical Services.
- It came into being on March 28, 1888, with the arrival of the first batch of 10 qualified British nurses in Bombay, to organize nursing in military hospitals in India.
- In 1893 it was designated as the Indian Army Nursing Service (IANS) and in 1902 as Queen Alexandra Military Nursing Service (QAMNS).
- In 1914 for the first time, nurses were enrolled in India and were attached to QAMNS.
- On October 1, 1926, a permanent nursing service for Indian troops was formed and was designated as the Indian Military Nursing Service (IMNS).
- On September 15, 1943, the IMNS officers became a part of the Indian Army and the members of the service became Commissioned Officers.
- After independence, the government constituted the MNS and the IMNS was subsumed in the MNS in 1950.
- The organization is headed at the Army Headquarters by the Additional Director General, MNS (ADGMNS) in the Rank of Major General and at command level by Brigadier MNS in the rank of Brigadier.

## 3. National Corporate Social Responsibility Awards (NCSRA)

- The NCSRA was instituted by the Ministry of Corporate Affairs to recognize outstanding contribution in the field of Corporate Social Responsibility (CSR).
- This is for the first time that these awards have been given. They will be given annually on the occasion of Gandhi Jayanti (October 2).
- The awards have been instituted to recognize CSR for inclusive growth and sustainable development. This award seeks to recognize the companies that have made a transformative impact on society.
- The awards are given in three categories:
  - \* Four awards for excellence in CSR, based on CSR spend
  - \* Five awards for CSR projects in Aspirational Districts
  - \* Eleven awards for CSR projects in National Priority Areas
- Three separate awards are for Micro, Small and Medium Enterprises (MSMEs).
- In accordance with the Scheme of National CSR Awards, the following have been designated to make nominations under different categories as mentioned above:
  - \* Ministries/Departments of the Government of India
  - \* State & Union Territories (UT) Governments
  - \* Professional institutions: ICSI, ICAI, ICAI
  - \* National Level Trade and Industry Chambers
- With the enactment of Companies Act, 2013 containing the CSR provision under Section 135, the mandate for CSR has now become a part of corporate governance.
- The CSR provisions in the Act came into force in 2014.
- The CSR activities, undertaken by the private and the public sector companies, are now expected to have strategic approach as opposed to mere charity, donations, etc. The CSR activities undertaken in project mode are envisaged to be structured, coordinated and monitored.

### Context:

- President of India presents National Corporate Social Responsibility Awards.



#### 4. Nayi Taleem

- It was a four-day festival organised by the the Asian Heritage Foundation
- The exhibition will showcase the 'parampara' of those who make crafts for others and how skills form an integral part of the heritage of India.
- Nayi Taleem is the principle of transmitting the whole education of the body, mind and soul through skilful labour

#### 5. Nobel Peace Prize

- The 2019 Nobel Peace Prize has been awarded to Ethiopian Prime Minister Abiy Ahmed who made peace last year with Eritrea, through his efforts to resolve the long-running conflict with the neighbouring country.
- Mr Abiy's peace deal with Eritrea ended a 20-year military stalemate following their 1998-2000 border war.
- He was named as the winner of the 100th Nobel Peace Prize.
- This is the second year in a row that an African has received the award.
- Congolese gynaecologist Denis Mukwege shared the prize with Yazidi activist Nadia Murad in 2018 for their work combating sexual violence.

#### 6. Poison Fire Coral fungus

- Originally discovered in China in 1895, the reddish-orange poison fire coral (*Podostroma cornu-damae*) is predominantly encountered in Asia, including Korea, Japan, and the Java Islands.
- Commonly found on tree roots and in the soil, the mushroom produces at least eight toxic compounds that can be absorbed straight through the skin.
- If eaten, the fungus can cause organ failure and brain damage.
- It causes an array of symptoms including vomiting, diarrhoea, fever and numbness.

#### 7. India is home to Asia's oldest bamboo

##### Context

- An international team of researchers found two fossil compressions or impressions of Bamboo Culms (stems)
- They were named *Bambusiculmus Tirapensis* and *B. Makumensis* - as they were found in the Tirap mine of Makum Coalfield in Assam.
- These belonged to the late Oligocene period of about 25 million years ago.

##### Details

- Yunnan Province in China now has the highest diversity of bamboo, but the oldest fossil in that region is less than 20 million years old

- But a new fossil record has shown that India is the birthplace of Asian bamboo, and they were formed about 25 million years ago in the north-eastern part of the country.

- \* This clearly indicates that Asian bamboo was born in India and then migrated to China
- \* This finding further strengthens the theory that bamboo came to Asia from India and not from Europe.

- They also found two impressions of bamboo leaves belonging to new species *Bambusium deomarensense*, and *B. arunachalense*, named after the Doimara region of Arunachal Pradesh where it was discovered.

- \* These leaves were found in the late Miocene to Pliocene sediments, indicating that they were between 11 and three million years old.

#### 8. North East Handloom and Handicraft Exhibition in Aizawl

##### Context

- Union Minister for Home Affairs inaugurated the North East Handloom and Handicraft Exhibition in Aizawl, Mizoram.

##### About the exhibition

- This first ever North-East Handloom and Handicraft Exhibition is fully funded by the North Eastern Council and hosted by the Government of Mizoram.
- Mizoram has invited all the North Eastern states including Sikkim for participation in the event.
- Besides participation from state government departments, participation from organisations such as North East Handloom and Handicraft Development Corporation Shillong, Cane and Bamboo Technology Centre Assam, Nagaland Bamboo Development Agency and craftsmen and weavers from the north east will be featured in the event.

##### Significance

- Handloom and handicrafts can generate huge employment opportunities in the North East, due to availability of natural resources and presence of traditional culture and skill
- Handloom will play a bigger role for progress of the region.

#### 9. Kayakalp Awards

##### Context:

- Union Health Minister gave away Kayakalp awards to public and private health facilities for high standards of sanitation and hygiene.

##### Details:

- The Kayakalp Award was instituted as part of the Swachh Bharat Abhiyan in 2015 as a national initiative to recognize and felicitate public health facilities that demonstrate high levels of cleanliness, hygiene and infection control measures on promoting cleanliness in public spaces.

#### **About Kayakalp:**

- This is a nationwide initiative under the Swachh Bharat Mission to promote cleanliness and enhance the quality of public health facilities.
- The purpose of this initiative is to appreciate and recognise their effort to create a healthy environment.
- Swachhta guidelines for health facilities along with this initiative have also been issued.
- There is a cash award as well which winners receive.

#### **Objectives of the Kayakalp Award Scheme:**

- To promote cleanliness, hygiene and Infection Control Practices in public Health Care Facilities.
- To incentivize and recognize such public healthcare facilities that show exemplary performance in adhering to standard protocols of cleanliness and infection control.
- To inculcate a culture of ongoing assessment and peer review of performance related to hygiene, cleanliness and sanitation.
- To create and share sustainable practices related to improved cleanliness in public health facilities linked to positive health outcomes.

### **10. World Standards Day**

#### **Context**

- The Union Minister of Consumer Affairs, Food & PD inaugurated the 60th celebration of the 'World Standards Day' by the Bureau of Indian Standards (BIS).

#### **Details:**

- The theme of this year's celebration is "Video Standards create a global stage".
- The theme is highly relevant in the Indian context as India is the fastest-growing entertainment and media market globally.
- It is also relevant because mobile phones and other electronic devices and IT have boosted video production and it is estimated that by 2020, 80% of all internet traffic will be consumed by 'Video Streaming Data'.

#### **About World Standards Day (WSD):**

- World Standards Day (WSD) is celebrated each year all over the world on 14 October by the members of the International Electro technical Commission (IEC), International Organization for Standardization (ISO) and International Telecommunication Union (ITU) to pay tribute to the collaborative efforts of thousands of experts worldwide, who develop voluntary technical agreements that are published as International or National Standards.
- It is also called International Standards Day.

- The aim of WSD is to raise awareness among regulators, industry and consumers as to the importance of standardization to the global economy.
- The first WSD was observed in 1970.

### **11. Prahari scheme**

- Delhi Police launched Prahari scheme to prevent crime.
- It is basically a community policing scheme. Under this scheme, civil personnel such as chowkidars and security guards deployed in the commercial and VIP areas will act as the eyes and ears of the police.

# PRACTICE QUESTIONS

**1. Which of the following tribe/s is/are NOT classified as Particularly Vulnerable Tribal Groups (PVTG)s?**

1. Saharia
2. Galo
3. Sentinelese

Choose the correct option:

- A. 1 only
- B. 2 only
- C. 1 and 2 only
- D. 3 only

**2. Consider the following statements:**

1. Centaurs are celestial bodies located between Jupiter and Neptune.
2. The Centaurs have highly unstable orbits around the sun.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**3. Consider the following statements:**

1. Hambantota port is a deep-water port on the Western Coast of Sri Lanka.
2. India has a long term lease on Sri Lanka's Hambantota port.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**4. Consider the following statements with respect to Election Commission of India:**

1. It is an autonomous constitutional authority.
2. It is responsible for administering the elections of President, Vice President and Municipal Corporations.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**5. Consider the following statements:**

1. Index of Industrial Production (IIP) is published by the Central Statistical Organisation (CSO).
2. It is a composite indicator that measures the long-term changes in the volume of production of a basket of industrial products.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. 1 and 2 only
- D. Neither 1 nor 2

**6. Which of the following is the most suitable definition of "Unemployment Trap":**

- A. A situation where more people are employed than actually needed.
- B. A situation arising from the mismatch between the jobs available in the market and the skills of the available workers in the market.
- C. A situation where unemployment benefits discourage the unemployed to go to work.
- D. A situation where persons are deemed unemployed, since records of their work are never maintained.

**7. Twin deficit in an economy means:**

- A. High Current Account Deficit and High Fiscal Deficit
- B. High Current Account Deficit and High Capital account deficit
- C. High Capital Account Deficit and High Fiscal deficit
- D. High Budget Deficit and High Fiscal deficit

**8. Consider the following statements with respect to School Education Quality Index (SEQI):**

1. SEQI comprises of 3 critical indicators that assess the delivery of quality school education in the states and Union Territories.
2. Self-reported data from the states also forms a part of the survey data.
3. SEQI 2019 is the first-ever edition of the index.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

**9. Consider the following statements with respect to Exchange Traded Funds (ETFs):**

1. ETFs are traded in Stock Markets.
2. They are index funds.
3. They are less liquid than Mutual Funds.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

**10. Consider the following statements with respect to Swachh Bharat Abhiyan:**

1. Swachh Bharat Abhiyan (Urban) operates under the Ministry of Drinking Water and Sanitation.
2. The programme has received funds and technical support from the World Bank, and state governments under the Sarva Shiksha Abhiyan and Rashtriya Madhyamik Shiksha Abhiyan schemes.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**11. Consider the following statements with respect to Minimum Alternate Tax:**

1. Minimum Alternate Tax is an indirect tax.
2. It is imposed on book profit of companies.
3. MAT is applicable to "Zero tax companies".

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 3 only

**12. Which of the following schemes are included under the National Food Security Act, 2013:**

1. Midday Meal Scheme
2. Public Distribution Scheme
3. Integrated Child Development Services scheme

Choose the correct option:

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1, 2 and 3

**13. Consider the following statements with respect to Bru Tribes:**

1. 'Bihu' is the most popular festival of Reang tribes.
2. They are well known for Hojagiri folk dance.
3. Bru tribe, subject to Ethnic Violence in the North Eastern State of Assam in 1997, fled to Tripura.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. 2 and 3 only
- D. 1, 2 and 3

**14. Consider the following statements with respect to Lokpal Act:**

1. It applies to public servants in and outside India.
2. A complaint under the Lokpal Act shall only relate to a period during which the public servant was holding or serving in that capacity.
3. Lokpal has superintendence over any investigation agency excluding the Central Bureau of Investigation CBI for cases referred to them by the ombudsman.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 3 only
- D. 1, 2 and 3

**15. Which of the following is correct with respect to the recently launched PRAKASH portal:**

- A. The portal is launched for providing an interface between fly ash producers and potential ash users such as road contractors, cement plants.
- B. The portal is launched to track the progress of provision of free electricity connections to households in rural areas and poor families in urban areas under the Saubhagya Scheme
- C. The portal is launched for Geo-tagging assets created under Rashtriya Krishi Vikas Yojana
- D. The portal is launched for improving coordination between the power, coal and railway ministries to ensure coal supplies to power plants.

**16. Which of these books were authored by Mahatma Gandhi:**

1. Hind Swaraj
2. My Experiments with Truth
3. Unto This Last

Choose the correct option:

Options:

- A. 2 and 3 only
- B. 1 and 2 only
- C. 1 and 3 only
- D. 1, 2 and 3 only

**17. With reference to Central Public Works Department in India**

1. The Centralized public works can be traced to efforts of Lord Dalhousie
2. It comes under the control of Ministry of Housing & Urban Affairs
3. Activities of this department has always been restricted to India

Which of the above statements is/are correct?

- A. 1 only
- B. 3 only
- C. 1 and 2 only
- D. 2 and 3 only

**18. Van Vihar National Park is in the state of:**

- A. Rajasthan
- B. Gujarat
- C. Uttar Pradesh
- D. Madhya Pradesh

**19. Consider the following about Brihadisvara Temple:**

1. It was built by Rajendra Chola
2. It is a Hindu temple dedicated to Vishnu
3. The temple is a part of the UNESCO World Heritage Site known as the "Great Living Chola Temples"

Which of the above statements is/are incorrect?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. None

**20. Mount Vesuvius is in which country?**

- A. USA
- B. Italy
- C. Indonesia
- D. Japan

**21. Consider the following statements:**

1. The President, under Article 72 and the Governor under Article 161 has the power to grant pardon to a person awarded death sentence.
2. While the President's power to grant pardon extends in cases where the punishment or sentence is by a Court Martial, the Governor does not enjoy such power.

Which of the given statement/s is/are correct?

**Options:**

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**22. Which of the following state/s DO NOT come under the purview of Indian Forests Act of 1927?**

1. Mizoram
2. Orissa
3. Uttar Pradesh

Choose the correct option:

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 2 only

**23. Consider the following statements with respect to the Eighth Schedule of the Indian Constitution:**

1. The schedule lists the official languages of India.
2. The schedule recognises 22 languages as official languages of the Republic of India.
3. Gondi, Bodo, Dogri and Santhali were added to the list of official languages by 92nd Constitutional Amendment Act

Which of the given statement/s is/are correct?

- A. 1 only
- B. 1 and 3 only
- C. 1 and 2 only
- D. 2 and 3 only

**24. Consider the following statements:**

1. Output gap is expressed as a percentage of gross domestic product (GDP).
2. A negative output gap occurs when actual output is less than what an economy could produce at full capacity.
3. A negative gap means that there is spare capacity in the economy due to weak demand.

Which of the given statement/s is/are correct?



- A. 1 and 2 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. 1, 2 and 3

**25. Consider the following statements with respect to MOSAiC expedition:**

1. MOSAiC is the largest ever Arctic expedition.
2. The mission is aimed at studying the impact of climate change on the Arctic.

Which of the given statement/s is/are correct?

Options:

- A. 1 Only
- B. 2 Only
- C. Both 1 and 2
- D. Neither 1 nor 2

**26. Consider the following statements:**

1. Ramlila is inscribed in the "Intangible Cultural Heritage of Humanity" by UNESCO.
2. It is a folk enactment that involves song, narration, recital and dialogue.
3. It is based on Hindu epic Ramcharitmanas by Surdas.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. 1, 2 and 3

**27. Consider the following statements with respect to Deposit Insurance and Credit Guarantee Corporation of India (DICGC):**

1. DICGC is a wholly-owned subsidiary of RBI.
2. Deposit insurance by DICGC does not cover foreign banks operating in India.
3. DICGC does not deal directly with depositors.

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 2 and 3 only
- C. 2 only
- D. 3 only

**28. Consider the following statements:**

1. Information Fusion Centre – Indian Ocean Region (IFC-IOR) is an information-sharing hub of maritime data established in Gurugram.
2. Sri Lanka, Bangladesh and Thailand are among the nations that have joined the IFC-IOR coastal radar chain network.

Which of the given statement/s is/are correct?

Options:

- A. 1 Only
- B. 2 Only
- C. Both 1 and 2
- D. Neither 1 nor 2

**29. Consider the following statements:**

1. Garo, Jaintia and Khasi tribes of Meghalaya are all matrilineal communities.
2. They are clubbed as "unrepresented tribes" for nomination in Meghalaya's autonomous tribal councils.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**30. Consider the following statements with respect to Comprehensive National Nutrition Survey (CNNS):**

1. CNNS has been conducted by the Ministry of Health and Family Welfare and the World Health Organisation (WHO).
2. It includes children, adults and senior citizens in both urban and rural areas across India.

Which of the given statement/s is/are INCORRECT?

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**31. Consider the following statements:**

1. Rising carbon dioxide levels can accelerate zinc deficiency in crops.
2. Zinc deficiency causes diarrhoea, growth retardation, loss of appetite and impaired immune function in humans.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**32. Consider the following statements with respect to Hypoxia – Inducible Factors (HIF)**

1. Hypoxia inducible factor, regulates production of red blood cells.
2. When the level of oxygen in the cells increases, HIF in the cells increases.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**33. Consider the following pairs:**

1. Bhavantar Bhugtan Yojana - Uttar Pradesh
2. Rythu Bandhu Scheme – Karnataka
3. Kalia Scheme - Odisha

Which of given pair/s is/are NOT correctly matched?

- A. 1 and 2 only
- B. 2 only
- C. 1 only
- D. 1 and 3 only

**34. Consider the following statements:**

1. GAGAN satellite was developed by Indian Space Research Organisation (ISRO) and Defence Research and Development Organisation (DRDO).
2. GAGAN Payload is operational through geosynchronous satellites.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**35. Consider the following statements with respect to Lunar Crater Observation and Sensing Satellite (LCROSS):**

1. It is a robotic spacecraft operated by European Space Agency.
2. It was successful in confirming water in the southern lunar crater Cabeus.

Which of the given statement/s is/are INCORRECT?

**36. Consider the following statements with respect to PM KISAN Scheme:**

1. Under the programme, vulnerable landholding farmer families, having cultivable land upto 2 hectares, will be provided direct income support of a lump sum amount of Rs. 6,000 per year.
2. It is a Central Sector scheme.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**37. Consider the following statements with respect to Gangetic Dolphins:**

1. It is the National Aquatic Animal of India.
2. It is classified as Critically Endangered as per the IUCN Red List
3. It is the only surviving freshwater dolphin in India.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 2 only
- D. 1 and 3 only

**38. Consider the following statements:**

1. "Operation Peace Spring" is a military operation against Kurdish-led forces in north-eastern Syria.
2. The military operation is led by Turkey together with the Syrian National Army.

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**39. Consider the following statements with respect to Invasive alien species:**

1. They may lead to changes in the structure and composition of ecosystems.
2. They are a threat to amphibians, reptiles as well as mammals.

3. Aichi Biodiversity Target 9 touches upon the issue of Invasive alien species.

Which of the given statement/s is/are correct?

- A. 1, 2 and 3 only
- B. 1 and 2 only
- C. 1 and 3 only
- D. 2 and 3 only

**40. Consider the following statements with respect to Swachh Survekshan:**

1. It is a ranking exercise taken up by the Government of India to assess rural and urban areas for their levels of cleanliness and active implementation of Swachhata mission.

2. The Ministry of Drinking Water and Sanitation takes up the Swachh Survekshan in urban and rural areas.

3. Quality Council of India (QCI) has been commissioned the responsibility of carrying out the assessment.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 1 and 3 only
- C. 2 only
- D. 1 and 2 only

**41. Dharma Guardian is a joint military exercise between India and**

- A. China
- B. Japan
- C. South Korea
- D. Thailand

**42. Consider the following about Burkina Faso**

1. It is a country on the western coast of Africa opening to Atlantic

2. Burkina Faso is a francophone country, with French as the official language of government and business.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both
- D. None

**43. Consider the following about Jaldoot:**

1. It is a unique initiative to spread the message of water conservation to masses

2. It is initiated by Uttar Pradesh Govt to Protect Ganga

Which of the given statement/s is/are incorrect?

- A. 1 only
- B. 2 only
- C. Both
- D. None

**44. With reference to Palaly Airport**

1. It is present on south eastern part of Srilanka

2. It will help in expanding connectivity between Srilanka and Southern part of India

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both
- D. None

**45. Consider the following statements with respect to Sanjay Gandhi National Park:**

1. Sanjay Gandhi National Park is a part of Western Ghats biodiversity.

2. Kanheri rock-cut caves situated within the national park was an important Buddhist learning centre.

3. The park encompasses three lakes.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 1 and 2 only
- D. 2 and 3 only

**46. Consider the following statements with respect to Bio-Chemical Oxygen Demand (BOD):**

1. It is the amount of dissolved oxygen needed by aerobic biological organisms to break down organic material.

2. Lesser the BOD worse is the health of the river.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**47. Consider the following statements:**

1. Doklam is a narrow plateau lying in the tri-junction of India, China and Bhutan.

2. It lies between Chumbi Valley to the East, Ha Valley to the North and Sikkim state to the west.

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**48. Consider the following statements with regard to Shanghai Cooperation Organization (SCO):**

1. Shanghai Cooperation Organization (SCO) is a Eurasian political, economic, and military organisation.
2. China, Russia, India, Kyrgyzstan, Tajikistan are the founding members of SCO.

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**49. Consider the following statements with respect to "Red Notice":**

1. It is an international arrest warrant issued by the INTERPOL General Secretariat at the request of a member country or an international tribunal.
2. It is a request for law enforcement worldwide in order to locate and provisionally arrest a person pending extradition.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**50. Project "Beehive" is:**

- A. It is a project of the Army's Corps of Electronics and Mechanical Engineers (EME) connecting all its workshops to an integrated smart network with real-time data analytics capabilities.
- B. It is a project to promote bee keeping under the Mission for Integrated Horticulture (MIDH).
- C. It is a technological research and development centre of Kerala Police Department conceived as a cyber-centre of excellence in cyber security.
- D. It is a project launched for promotion and development of handicrafts sector under National Handicraft Development Programme (NHDP).

**51. Which of the following are present within the Nilgiri Biosphere Reserve?**

1. Bandipur National Park
2. Mudumalai Wildlife Sanctuary
3. Wayanad Wildlife Sanctuary
4. Periyar National Park
5. Nagarhole National Park

Choose the correct option:

- A. 1, 2, 3 and 5 only
- B. 2, 3, 4 and 5 only
- C. 1, 2, 4 and 5 only
- D. 1, 2, 3, 4 and 5

**52. Consider the following statements:**

1. A typhoon is a mature tropical cyclone that develops in the Northwestern Pacific Basin
2. Northwestern Pacific Basin is the most active tropical cyclone basin on Earth.
3. Typhoons, hurricanes and cyclones are all tropical cyclones, the only difference being – location of the storm.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. 1, 2 and 3

**53. Consider the following statements:**

1. RFID technology uses electromagnetic fields to automatically identify and track tags containing electronically-stored information.
2. RFID communication is the same as two way radio communication.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**54. Consider the following statements with respect to Right to Information Act, 2005:**

1. NGOs funded by the Government do not come under the ambit of RTI Act.
2. Private bodies which perform public services or which receive funds or concession from the government are included under the ambit of RTI.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

- C. 1 and 2 only
- D. Neither 1 nor 2

**55. Consider the following statements:**

1. Rafale is a twin-engine, multirole combat aircraft.
2. France, Egypt, Russia and Qatar currently operate the Rafale.

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**56. Consider the following statements:**

1. A Graded Response Action Plan (GRAP) is a set of stratified actions taken to control the pollution levels.
2. The plan includes action to be taken by the state governments throughout the year to tackle industrial, vehicular and combustion emissions.

Choose the correct answer:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**57. Consider the following statements with respect to River Indus:**

1. The river flows in north-west direction from its source.
2. It empties into the Arabian Sea south of Karachi.
3. Hunza, Shiger, Gilgit are the Himalayan tributaries of the Indus.

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 1 and 3 only
- C. 1, 2 and 3
- D. None of the above

**58. Consider the following statements:**

1. National Security Guard is a Special Forces unit under the Ministry of Defence.
2. The NSG was formed in 1986 by an act of Parliament.

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 2 only

**59. Consider the following statements with respect to All India Women's Education Fund Association (AIWEFA):**

1. It was founded by Rajkumari Amrit Kaur, Sarojini Naidu, Aruna Asaf Ali and Annie Besant.
2. It has an observer status at the United Nations Framework Convention on Climate Change (UNFCCC)
3. It has been conferred with the Special Consultative status (ECOSOC) by the UN

Which of the given statement/s is/are correct?

- A. 1 and only
- B. 2 and 3 only
- C. 1 only
- D. 1, 2 and 3

**60. Consider the following statements with respect to Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana:**

1. It is a centrally sponsored programme.
2. It provides poor and vulnerable families an insurance coverage of up to Rs. 5 lakh per family per year for secondary and tertiary hospitalization.
3. The beneficiaries are selected as per the socio-economic caste census (SECC) data of 2011.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 1 and 3 only
- D. 1, 2 and 3

**61. Consider the following statements with respect to Rashtriya Gokul Mission:**

1. Rashtriya Gokul Mission aims to conserve and develop indigenous breeds of cattle.
2. It is a component of the National Programme for Bovine Breeding and Dairy Development (NPBBDD).

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 1 only
- C. 2 only
- D. Neither 1 nor 2



**62. Consider the following statements with respect to Global Hunger Index:**

1. The component indicators of Global Hunger Index are undernourishment, child wasting, child stunting, child mortality.
2. It is published annually by International Food Policy Research Institute (IFPRI).

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**63. Consider the following statements:**

1. Tulagi Island is a part of the Solomon Islands.
2. It lies in the South Pacific, directly between Australia and the U.S.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**64. Which of the following statements regarding Zoonotic diseases are incorrect?**

1. Zoonosis can be caused by virus, fungi or parasites but not by bacteria.
2. Both Dengue and Ebola are Zoonotic diseases.

options;

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**65. Which of the following statements are correct with regard to Catalonia?**

1. It is bordered by the Mediterranean sea to the west.
2. Barcelona is the regional capital of Catalonia.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**66. Which of the following naval exercises of India with other countries have been matched correctly?**

1. INDRA: Russia
2. VARUNA: United Kingdom
3. SIMBEX: Singapore
4. KONKAN: France

Options:

- A. 1 and 2
- B. 1, 2 and 3
- C. 1 and 3
- D. 1, 2, 3 and 4

**67. Which of the following statements are false?**

1. The Ajanta caves were sponsored by the Satvahana dynasty in the Hinayana phase and the Vakataka dynasty in the Mahayana phase.
2. Unlike the Ellora caves, ajantha caves are excavated in the sloping sides of a hill and not in a perpendicular cliff.
3. Ajantha caves have Viharas, Chaitya halls, temples and edifices.
4. Boddhisatva Padmapani is a famous mural painting associated with the ajantha caves.

Which of the given statement/s is/are correct?

- A. 1 and 2
- B. 1 and 4
- C. 1, 2 and 3
- D. 1, 2, 3 and 4

**68. Which of the following are apple producing states?**

1. Jammu and Kashmir
2. Himachal Pradesh
3. Tamil Nadu
4. Rajasthan

Which of the given statement/s is/are correct?

- A. 1 and 2
- B. 1, 2 and 3
- C. 1, 2 and 4
- D. 1, 2, 3 and 4

**69. Consider the following statements with respect appointment of Chief Justice of India:**

1. The procedure for appointment of the CJI is laid out in Article 124 of the Constitution of India.
2. The recommendations for the appointment of CJI, made to the government by the incumbent CJI or the collegium can be sent back for reconsideration.

which of the following statements are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**70. Consider the following statements:**

1. United Nations Human Rights Council (UNHRC) is a United Nations body whose mission is to promote and protect human rights around the world.
2. UNHRC was founded as a substitute to UN Commission on Human Rights.
3. The members of UNHRC are selected by the UN General Assembly on a staggered basis, each year for a five-year term.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 1 and 3 only
- D. 1, 2 and 3

**71. Consider the following statements with respect to Imaging Infrared Spectrometer**

1. It measures light from the lunar surface in narrow spectral channels (bands).
2. One of its objectives is also to carry out a detailed study of the lunar exosphere.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. 1 and 2 only
- D. Neither 1 nor 2

**72. Consider the following statements:**

1. First generation biofuels are produced from non-food crops.
2. Second generation biofuels are produced from sugar, starch, vegetable oil.
3. Third generation biofuels are produced from micro-organisms like algae.

Which of the given statement/s is/are incorrect?

- A. 1 and 2 only
- B. 1 and 3 only
- C. 2 and 3 only
- D. 3 only

**73. Consider the following pairs of the state animal and the corresponding states.**

1. One-horned Rhino – Assam
2. Wild Water Buffalo – Bihar
3. Asiatic Lion – Gujarat
4. Sangai – Manipur

Which of the pairs is/are correctly matched?

- A. 1 and 3 only
- B. 1, 3 and 4 only
- C. 1, 2 and 3 only
- D. 1, 2 3 and 4

**74. Consider the following statements with respect to "Project Tiger":**

1. It is a Central Sector Scheme of the Ministry of Environment and Forests.
2. The National Tiger Conservation Authority (NTCA) was constituted under Project Tiger in 1973 for reorganised management of Project Tiger.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**75. The first Pre Independence Law Commission of India was chaired by:**

- A. Lord Thomas Babington Macaulay
- B. Sir John Romilly
- C. Dr. Whitley Stokes
- D. Sir Charles Turner

**76. Consider the following statements with respect to Bhashan Char Island:**

1. Bhashan Char that lies in the Bay of Bengal was formed about two decades ago on the mouth of river Meghna.
2. It is located to the east of Hatiya island.

Which of the given statement/s is/are correct?

- A. 1 Only
- B. 2 Only
- C. Both 1 and 2
- D. Neither 1 nor 2

**77. Consider the following statements with respect to Crime & Criminal Tracking Network System (CCTNS)**

1. Crime & Criminal Tracking Network System (CCTNS) is implemented by National Crime Investigation Bureau.

2. It aims at creating a comprehensive and integrated system aimed at enhancing the efficiency and effectiveness of policing.

3. CCTNS is a Mission Mode Project under National e-Governance Plan of Government.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

**78. Consider the following statements with respect to "Maltodextrin":**

1. Maltodextrin increases the shelf life of packaged foods.

2. The addition of Maltodextrin to milk decreases the levels of fat and Solids-not-Fat (SNF).

3. It has potentially severe health impacts, including the risk of cancer.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 1 only
- C. 2 and 3 only
- D. 1, 2 and 3

**79. Consider the following statements:**

1. The Committee on Reforms of Criminal Justice System was constituted by the Home Ministry to examine the fundamental principles of criminal law.

2. The committee was headed by Justice V.S. Malimath

3. It was tasked with reviewing the Code of Criminal Procedure (CrPC), 1973 and the Indian Penal Code (IPC), 1860 only.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3
- D. 1 only

**80. Consider the following statements:**

1. The ecological flow notification, 2018 by the government of India mandates that project developers ensure a minimum supply of water all through the year.

2. It is applicable to the Hydropower projects across all the rivers in India.

Which of the given statement/s is/are Incorrect?

- A. 1 only
- B. 2 only

C. Both 1 and 2

D. Neither 1 nor 2

**81. Which of the following is NOT an Ozone layer depleting substance?**

- A. Chlorofluorocarbons
- B. Carbon Tetrachloride
- C. Carbon Dioxide
- D. Methyl Chloroform

**82. Which of the following is/are NOT included in the UNESCO's list of Intangible cultural heritage (ICH):**

- 1. Buddhist chanting of Ladakh
- 2. Ramman
- 3. Ayodhya Deepotsav
- 4. Ramlila

**Choose the correct option:**

- A. 1 and 3 only
- B. 2 and 4 only
- C. 3 only
- D. 4 only

**83. Consider the following statements with respect to McMahon Line:**

1. The McMahon Line is the demarcation line between the Tibetan region of China and the North-east region of India.

2. It runs from the eastern limit of Bhutan to a point near the Talu Pass at the trijunction of Tibet, India and Myanmar.

3. The demarcation was proposed by Henry McMahon at the Shimla Convention.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 1 and 3 only
- C. 1 and 2 only
- D. 1, 2 and 3

**84. Arrange the following from North to South:**

- 1. Cho la Pass
- 2. Doklam
- 3. Nathu La Pass

**Choose the correct option:**

- A. 2, 1, 3
- B. 1, 2, 3

- C. 1, 3, 2
- D. 2, 3, 1

**85. Consider the following statements with respect to Polar Satellite Launch Vehicle (PSLV):**

1. Polar Satellite Launch Vehicle (PSLV) is the second generation launch vehicle of India.
2. It is the first Indian launch vehicle to be equipped with liquid stages.
3. The vehicle has successfully launched Chandrayaan-1 and Mars Orbiter Spacecraft.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 3 only
- D. 2 and 3 only

**86. Consider the following statements with respect to "Snow Leopard":**

1. It is classified as "Endangered" in the IUCN Redlist.
2. It is the state animal of Himachal Pradesh.
3. Besides India, snow leopards are only found Pakistan, Russia and China.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 only
- C. 1 and 3 only
- D. 1, 2 and 3

**87. Consider the following statements with respect to Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR):**

1. The Convention on the Conservation of Antarctic Marine Living Resources, is part of the Antarctic Treaty System.
2. It is headquartered at Tasmania in Australia.
3. India is not a member of the Convention.

Which of the given statement/s is/are Incorrect?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 3 only

**88. Consider the following statements regarding SAFAR-India:**

1. SAFAR stands for System of Air Quality and Weather Forecasting and Research.

2. The SAFAR system is developed by Indian Institute of Tropical Meteorology, Pune, along with India Meteorological Department (IMD) and National Centre for Medium Range Weather Forecasting (NCMRWF).

3. It provides location specific information on air quality on near real time basis and it can forecast 1-3 days in advance.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 Only
- C. 1, 2 and 3 only
- D. 1 and 3 only

**89. Which of the following tiger reserves are correctly matched with their state locations?**

1. Kawal : Telangana
2. Pakke: Assam
3. Nagarhole: Tamil Nadu
4. Buxa : West Bengal

Which of the given statement/s is/are correct?

- A. 1 and 3 only
- B. 1, 2 and 3 only
- C. 1 and 4 only
- D. 1, 2, 3 and 4

**90. Consider of the following statements regarding Non-Aligned Movement**

1. The NAM was established in 1961 in Belgrade, Yugoslavia.
2. After the United Nations, NAM is the largest grouping of states worldwide.
3. India recently withdrew from NAM.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 1, 2 and 3 only
- D. 3 only

**91. Which of the following statements are correct regarding the Representation of peoples act, 1951?**

1. The act deals with qualification and disqualification of members of both houses of Parliament.
2. According to it, a person convicted of any offence and sentenced to imprisonment for not less than two years, shall be disqualified from the date of such conviction and shall continue to be disqualified for a further period of six years since his/her release.

3. It provides the conditions for the qualification of voters to be eligible for voting.

Options;

- A. 1 only
- B. 1 and 2 only
- C. 1, 2 and 3 only
- D. 2 only

**92. Which of the following statements are correct regarding the National Green tribunal (NGT)?**

1. Established via the National Green Tribunal Act, 2010 of the Parliament for the expeditious disposal of the cases pertaining to environmental issues.

2. The Tribunal shall not be bound by the procedure laid down under the Code of Civil Procedure, 1908, but shall be guided by principles of natural justice.

3. India is the third country following Australia and New Zealand to have such a system.

Options:

- A. 1 and 2
- B. 1, 2 and 3
- C. 1 and 3
- D. 1 only

**93. Which of the following statements are correct regarding Sarus crane?**

1. It is the tallest of all the flying birds.

2. It is endemic to the Indian sub-continent.

3. Unlike many other cranes that make long migrations, Sarus cranes are largely nonmigratory.

4. The Sarus crane is classified as vulnerable on the IUCN Red List.

Options:

- A. 1 and 2
- B. 1, 2 and 3
- C. 1, 2, 3 and 4
- D. 1, 3 and 4

**94. Which of the following statements are correct regarding POCSO act?**

1. Recent amendments have included the provision of death penalty for aggravated sexual assault on children.

2. The Bill provides for levying fines and imprisonment to curb child pornography.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**95. Which of the following statements are correct with regard to the SC guidelines on crackers?**

1. These guidelines are valid only for the NCR where severe air pollution is a grave concern.

2. The Guidelines prohibits bursting of crackers in and around 100 mts from hospital, educational institutes, religious institutions and courts.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**96. Consider the following statements Hoysala Temple Architecture:**

1. Hoysala temples follow the stellate plan.

2. Generally, Soapstone is used in Hoysala Temples.

3. Temples at Belur, Halebid and Somanathpuram are classic examples of Hoysala Architecture.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. 1 and 2 only
- D. 1, 2 and 3

**97. Consider the following statements with respect to Red-naped ibis:**

1. Red-naped ibis is widespread across much of Australia.

2. It is not as aquatic as many other species of ibis.

3. It is classified as Vulnerable in the IUCN Red List.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 2 only
- D. 1 and 3 only

**98. Which of the following is/are NOT inflammatory bowel disease/s (IBD):**

1. Crohn's disease

2. Ulcerative colitis

3. Jaundice

Choose the correct option:

- A. 1 only
- B. 3 only
- C. 1 and 3 only
- D. 1, 2 and 3



99. Consider the following statements:

1. Bhaona is a traditional form of entertainment created by Sankardeva.
2. The art form is widely practiced in the north eastern state of Assam.
3. They are one act plays written in Brajavali and Sanskrit.

Which of the given statement/s is/are incorrect?

- A. 1 and 2 only
- B. 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

100. Arrange the following Atomic Power Station from North to South:

1. Kaiga Atomic Power Station
2. Narora Atomic Power Station
3. Kakrapar Atomic Power Station
4. Madras Atomic Power Station

- A. 2, 3, 1, 4
- B. 3, 2, 1, 4
- C. 2, 3, 4, 1
- D. 3, 2, 4, 1

101. Consider the following statements with respect to NATGRID:

1. It is a network of multiple standalone databases from various intelligence and enforcement agencies.
2. Only Central Bureau of Investigation, Research and Analysis Wing and the Enforcement Directorate will have access to NATGRID.

Which of the given statement/s is/are incorrect?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

102. Which of the following Directive Principles of State Policy is/are based on Gandhian principles:

1. Organization of village Panchayats
2. Prohibition of consumption of intoxicating drinks and drugs which are injurious to health
3. A Uniform Civil Code for the citizens

Choose the correct option:

- A. 1 and 3 only
- B. 1 and 2 only
- C. 1 only
- D. 1, 2 and 3 only

103. Consider the following statements:

1. Scorpene submarines are a class of diesel-electric attack submarines.
2. Air-independent propulsion (AIP) is a marine propulsion technology that allows non-nuclear submarines to operate without access to atmospheric oxygen.
3. INS Khanderi is the first Scorpene class submarine commissioned into the navy under Project-75.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 only
- C. 1 and 3 only
- D. 1, 2 and 3

104. Consider the following statements with respect to India Innovation Index:

1. India Innovation Index is co-published by Cornell University, INSEAD, and the World Intellectual Property Organization (WIPO).
2. The Index examines the innovation ecosystem of Indian states only.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

105. Consider the following statements with respect to Saharan silver ant:

1. Saharan silver ant is declared the world's fastest ant.
- 2.. It outpaces, in terms of speed, other invertebrates such as the Australian tiger beetle and the California coastal mite.

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 2 only.
- C. Both 1 and 2
- D. Neither 1 nor 2

106. Consider the following statements:

1. Cyclone is the formation of a very low-pressure system with very high-speed winds revolving around it.
2. Cyclonic activity is comparatively less intense in the Arabian sea, as compared to the Bay of Bengal.
3. The very severe cyclonic storm "Hikka" that was formed in the Arabian Sea was named by India.

Which of the given statement/s is/are correct?

- A. 1 Only
- B. 1 and 2 only
- C. 1 and 3 only
- D. 1, 2 and 3

**107. Consider the following statements:**

1. The Financial Action Task Force (FATF) is an intergovernmental organization founded to develop policies to combat money laundering.
2. It is an initiative of the International Monetary Fund.

Which of the given statement/s is/are INCORRECT?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**108. Which of the following pollutant/s is/are not included in the National Air Quality Index?**

1. Lead
2. Carbon Monoxide
3. Carbon Dioxide
4. Sulphur Dioxide

Choose the correct option:

- A. 1 only
- B. 3 only
- C. 1 and 3 only
- D. 2 and 4 only

**109. Which of the following is not correctly matched?**

- A. Fani -Bangladesh
- B. Vayu – India
- C. Hikaa – Sri Lanka
- D. Kyarr – Myanmar

**110. Consider the following statements:**

1. The Smart Cities Mission is an urban renewal and retrofitting mission undertaken by the Urban Development Ministry.
2. The Smart City Mission is being operated as a Centrally Sponsored Scheme (CSS).
3. The implementation of the Mission at the City level will be done by a Special Purpose Vehicle (SPV).

Which of the given statement/s is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 1 and 3 only
- D. 1, 2 and 3

**111. Nagaland borders the states of:**

1. Assam
2. Arunachal Pradesh
3. Manipur
4. Mizoram

Choose the correct option:

- A. 1, 2 and 3 only
- B. 1, 2 and 4 only
- C. 1 and 3 only
- D. 1, 2, 3 and 4

# ANSWER KEYS

1	B
2	C
3	D
4	A
5	A
6	C
7	A
8	B
9	A
10	B
11	A
12	D
13	B
14	A
15	D
16	B
17	C
18	D
19	A
20	B

21	B
22	A
23	C
24	D
25	C
26	A
27	C
28	A
29	A
30	C
31	C
32	A
33	A
34	B
35	A
36	B
37	D
38	D
39	A
40	B

41	B
42	B
43	B
44	B
45	B
46	A
47	B
48	B
49	B
50	A
51	A
52	D
53	C
54	D
55	B
56	A
57	D
58	A
59	B
60	D

61	A
62	A
63	C
64	A
65	B
66	C
67	B
68	D
69	D
70	B
71	A
72	A
73	B
74	D
75	A
76	C
77	B
78	B
79	A
80	B

81	C
82	C
83	D
84	C
85	D
86	B
87	D
88	C
89	C
90	B
91	B
92	B
93	D
94	C
95	B
96	D
97	C
98	B
99	B
100	A

101	B
102	B
103	A
104	D
105	B
106	B
107	B
108	B
109	C
110	D
111	A



# MAINS PRACTICE QUESTIONS

1. With India's ambitious goal to achieve renewable energy target of 450 GW (Giga Watts), policy gaps hobbling the renewable energy sector must be addressed. Discuss the challenges facing the renewable energy sector in India. (15 Marks, 250 Words).
2. With the unemployment figures in India at an all-time high, it is time India takes concrete measures to take advantage of the demographic dividend which will otherwise turn into a demographic liability. Analyse the statement. (15 Marks, 250 Words).
3. Many reports have found that several people in villages across India are still forced to defecate in open due to a lack of toilets, especially in impoverished colonies. In the light of Prime Minister Narendra Modi declaring India "Open Defecation-Free", analyse if India's ODF status is a reality. (15 Marks, 250 Words)
4. Write a note on the key features of the "One Nation, One Ration Card Scheme". What are the challenges in its implementation? (15 Marks, 250 Words)
5. The constraints imposed by RBI aimed at safeguarding depositors' interest can end up denting trust in cooperative banks and increasing the risk of a contagion. In the backdrop of the Punjab and Maharashtra Cooperative (PMC) Bank crisis, critically analyse the statement. (15 Marks, 250 Words).
6. In order to fight black money and ensure complete transparency in political funding, there is an urgent need to bring political parties under the ambit of the Right to Information Act. Analyse. (15 Marks, 250 Words).
7. There are certain limitations on RBI's ability to influence growth prospects in the Economy and boosting the slowdown prevalent in the market. Explain the role of RBI and government in inducing demand in the market. (15 Marks, 250 Words)
8. Worsening economic conditions coupled with domestic instability and regional tensions looks like a new 'Arab Spring' is gaining momentum in Iraq. What are its probable global implications? (15 Marks, 250 Words)
9. As a sovereign country, is India able to enforce its sovereign functions in terms of defence and economy independently? Justify your opinion. (15 Marks)
10. The Citizenship Amendment bill could be a major security challenge both internally and externally. Examine. (15 Marks)
11. With India facing an economic slowdown, it is an ideal time to implement agricultural reforms for the revival of the economy. Analyse. (15 Marks, 250 Words)
12. Lack of clarity with respect to manner of deportation of those left out of the NRC exercise could cast a shadow over the "best of the best" of ties between India and Bangladesh. Analyse. What are the other areas of bilateral relations that need attention? (15 Marks, 250 Words)
13. Diseases and deficiencies in Indian children sharply differ depending on their location of residence. Comment on the steps needed to address such problems in children and adolescents due to the rural-urban divide highlighted by the Comprehensive National Nutrition Survey. (15 Marks, 250 Words)
14. The strategy for 'water resources' as included in the NITI Aayog's 'Strategy for New India @75' is dull and unrealistic. With India's growing water crisis, the management of water resources has acquired critical importance and calls for realistic solutions and innovative solutions. Explain. (15 Marks, 250 Words)
15. The war against the Islamic State will be incomplete with the withdrawal of USA and lack of support to Syrian Democratic Forces. Comment. (15 Marks, 250 Words)
16. Increasing cases of mental disorders if left unchecked could lead to large scale suicides in India. Is Mental illness India's ticking bomb? Discuss. (15 Marks, 250 Words)
17. It is argued that the nationwide implementation of National Registry of Citizens will lead to large scale exclusion on a national scale. Critically Comment if India needs such a nation-wide exercise. (15 Marks, 250 Words)
18. Can increased penalties as per the recent amendments to the Motor Vehicles (Amendment) Act, 2019 act as a deterrent for reducing the incidences of road accidents and traffic crashes? Critically analyse.

19. Bilateral partnership with China is critical for India as it is both a neighbour and a rising great power. Comment on the challenges in enhancing cooperation between the two countries and suggest measures. (15 Marks, 250 Words)
20. The sedition law stifles dissent, contrarian views and is a weapon against the constitutional spirit of modern democracy. Is it time India's Sedition law be buried? Discuss. (15 Marks, 250 Words)
21. Explain in detail how the Lithium Batteries set off a technology revolution? Also comment on the Issues and Challenges Facing Rechargeable Lithium Batteries. (15 Marks, 250 Words)
22. What is an 'informal' summit, as opposed to a normal summit? Do they provide answers to questions baffling the countries? Critically Analyze. (15 Marks, 250 Words)
23. India often sees China through the prism of its ties with Pakistan, while China looks constantly for an American role in Indian actions. It is necessary to remove the worry of "third parties" if the two countries are to actually act on resolving serious issues they have in territorial, economic and strategic areas. Elucidate. (15 Marks, 250 Words).
24. What do you understand by Base erosion and profit shifting? Explain how Base Erosion and Profit Shifting (BEPS) has emerged as one of the most important challenges for governments across the world today. (15 Marks, 250 Words)
25. Explain how the experiment-based research that won the Nobel Prize in Economics 2019 would help in reducing global poverty? What is its significance to the Governments world over? (15 Marks, 250 Words).
26. The IAF has historically been one of the best-equipped forces in the region, but has seen its, quantitative advantage, against China and Pakistan narrow dramatically over the past two-odd decades. Comment on the steps taken by the government to address this concern. (15 Marks, 250 Words)
27. What is Indus Water Treaty? Why are India and Pakistan dissatisfied by the treaty?(15 Marks, 250 Words)
28. Critically comment on the performance of India's most ambitious health scheme – Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana. (15 Marks, 250 Words)
29. Greater female literacy translates into better health outcomes in the short run and poverty alleviation in the long run. Elucidate. (15 Marks, 250 Words).
30. How would the new Hong Kong Human Rights and Democracy Act alter the nature of relations between the United States and Hong Kong? Discuss. (15 Marks, 250 Words).
31. Explain the phenomenon of retreating monsoon in India. Why is retreating monsoon, if delayed – a cause of concern? (15 Marks, 250 Words)
32. The latest IMF World Economic Outlook says there is a synchronised global economic slowdown. What reforms can India pursue at this stage to align its manufacturing and trading activity with global demand patterns and protect itself from the world's growth pangs? (15 Marks, 250 Words)
33. In the light of the DNA Technology regulation bill being reintroduced in Lok Sabha, discuss the uses of DNA profiling and the concerns associated with it. Also discuss what provisions are inbuilt in the bill to address these challenges. (15 Marks, 250 words)
34. There has been a growing call for reforms in the global organizations. In this context discuss the need and significance of such reforms in IMF. (10 marks, 150 words)
35. In order to challenge the hegemony of China, safeguarding its immediate neighbourhood must be India's primary foreign policy focus. Discuss. (15 Marks, 250 Words)
36. What are the issues with the present Indian Penal Code(IPC)? Is there a need to reboot the code? Critically comment. (15 Marks, 250 Words)
37. With global economy growth prospects looking gloomy and with India's growth slowing down, there have been calls for appropriate policies to address this challenge. In this context, discuss alternatives being suggested in place of the traditional approach of "growth first model". (15 Marks, 250 Words)
38. According to the recently released National milk sample safety quality survey, contamination in milk is a more serious problem than adulteration. Discuss. (15 Marks, 250 Words).

39. Comment how the border dispute with China is posing a major challenge to the India-China bilateral relations. Enumerate the efforts taken by both sides in this regard and their results. (15 Marks, 250 Words).
40. The Antarctic ozone hole has hit its smallest annual peak on record since tracking began in 1982. What are the steps taken by the international community in this regard? Does the development signify the success of international efforts in cutting down on the use of ozone-depleting chemicals? (15 Marks, 250 Words).
41. Should reasonable restrictions under Article 19(2) be expanded to impose greater restrictions on Ministers in position of power? Critically comment. (15 Marks, 250 Words)
42. PSLV has emerged as the reliable and versatile workhorse launch vehicle of India. Elucidate. (10 Marks, 150 Words)
43. What should be the areas of focus if India wishes to achieve the goal of making a place for itself amongst the top 50, in the Ease of Doing Business Index by 2020? What are the hurdles? (15 Marks, 250 Words).
44. Lack of objective laws is a major deterrent in keeping a check on the growing social menace of lynching. Discuss. (15 Marks, 250 Words)
45. In the backdrop of the RCEP trade negotiations moving towards a possible conclusion, discuss the possible advantages and disadvantages of India's membership to RCEP. Suggest way forward. (15 marks, 250 words)
46. The representation of people's act 1951 is a key legislation for the electoral system of India. Discuss. Enumerate the salient features regarding the disqualification provisions in the act. (10 marks, 150 words).
47. With the Naga peace process moving towards the last leg elucidate the importance of an early settlement of the decade's old issue. Discuss the key demands of the Centre and the Nagas. (250 words, 15 marks)
48. In the backdrop of the SC guidelines on crackers in India, discuss the progress made in this regard and the challenges in their implementation. (150 words, 10 marks)
49. America's changed Afghan policy and the present context of Afghan peace talks are a matter of concern for Afghanistan and India. India may need to recalibrate its stated policy to protect its interest. Comment. (15 Marks, 250 Words).
50. The Supreme Court judgement in the recent Jose Paulo Coutinho case, 2019 has reiterated the need for framing a Uniform civil code. In this backdrop examine the need for a UCC and the challenges in implementing it in the Indian context. Suggest the suitable way forward. (15 marks, 250 words).
51. Is practicing "fair trade" over "free trade" detrimental to the development of a country? Analyse. (15 Marks, 250 Words)
52. With the increasing risks of cyber-attacks that could cripple critical parts of India's security and economic infrastructure, discuss what measures should be taken by the government to enhance the preparedness to deal with cyber-attacks on critical infrastructure. (15 Marks, 250 Words)
53. With a lack of objective criteria and judgements prone to subjectivity and errors, should Capital punishment be retained? Critically analyse. (15 Marks, 250 Words).
54. United Nations Human Rights Council (UNHRC) has played the role of a political platform that aims to ensure that human rights remain a top priority within the UN. With many members of the UN themselves being systematic human rights offenders, is UNHRC slowly losing its relevance? Justify your opinion. (15 Marks, 250 Words).
55. Discuss the features and process of formation of a tropical cyclone. How are they different from temperate cyclones? (15 Marks, 250 Words).
56. The Islamic State of Iraq and the Levant's (ISIL) double loss of territory and leadership has been a body blow to the terrorist group. However, the fight against the ISIL has not ended. Comment. (10 marks, 150 words).

# INTERVIEW TRANSCRIPT

**Name: Suresh Kumar Jagat**

AIR: 556 (CSE 2017)

Chairperson: Air Marshal Ajit Bhonsle sir

Duration: 25 – 30 minutes

Hometown: Korba, Chhattisgarh

**Suresh Kumar Jagat**

Optional Subject: Geography

Work Experience:

- 3.5 years in NTPC Ltd.
- 2 years in Central Water Commission (through ESE- 2013)
- Currently in Indian Railways Traffic Service (on leave) through CSE-2016

Education: B.Tech in Mechanical Engineering, National Institute of Technology, Raipur

Hobbies: Watching movies, spending time with children, travelling

**Air Marshal Ajit Bhonsle sir**

**Service: Air Marshal, Indian Air Force**

- Prior to joining UPSC, he held the Office of Chief of HQ, Integrated Defence Staff (IDS) and also as Deputy Chief of Joint Operations, Doctrines, Organization & Training
  - Air Marshal Ajit Bhonsle has participated in the Sri Lanka Indian Peace Keeping Force Operations, Siachin operations and Kargil operations and has 5200 hours of flying experience.
  - Air Marshal Ajit Bhonsle is an avid traveller and takes a keen interest in performing arts, culture and culinary. An animal lover, he is fond of golf, swimming and equestrian sports
- Educational Background

**Education Background**

- An alumnus of Bhonsala Military School, National Defence Academy, Defence Services Staff College, College of Defence Management and National Institute of Defence Studies, Japan, post-graduate Diploma in Mass Communication from IIMC, Delhi.
- M.Sc. Defence Studies from the University of Madras, Masters in Business Management from IGNOU and Osmania University and M.Phil from Tokyo.

**Interview**

Chairman started by appreciating the toppers reading his achievements provided in the DAF.

**Previous work experience**

- You have worked in very crucial sectors, how do think this will help in civil service?
- Was your previous jobs gender-sensitive:
- How did you manage to come out from a remote village and what are the challenges associated with it?
- What are the challenges faced by the water sector in India?

- Give some data on water availability in India.
- Do you think that the Central Water Commission (CWC) is doing good job?

### **Hometown Related**

- Tell me something about your native place?
- What do you know about custodial death in the jails of Chhattisgarh and what needs to be done?

### **Polity and governance**

- Why is linking Aadhar with social sector programmes necessary?
- What are the issues related to Data protection with Aadhar?
- Mechanism of maintaining transparency in India?
- How will you ensure corruption-free society?

### **Economy**

- Banking fraud, reasons and solution?
- How to confiscate the assets of a person?
- Letter of Understanding vs letter of credit?
- Tell me something about Financial resolution and deposit insurance bill?
- Demonetisation effect on the economy.
- What are the important Railway sector reforms?
- What is Telgo Train?

### **International Relations**

- How do you see the international relations of India with neighbouring countries considering the water disputes?